MAR 19 1956

FIRE ENGINEERING

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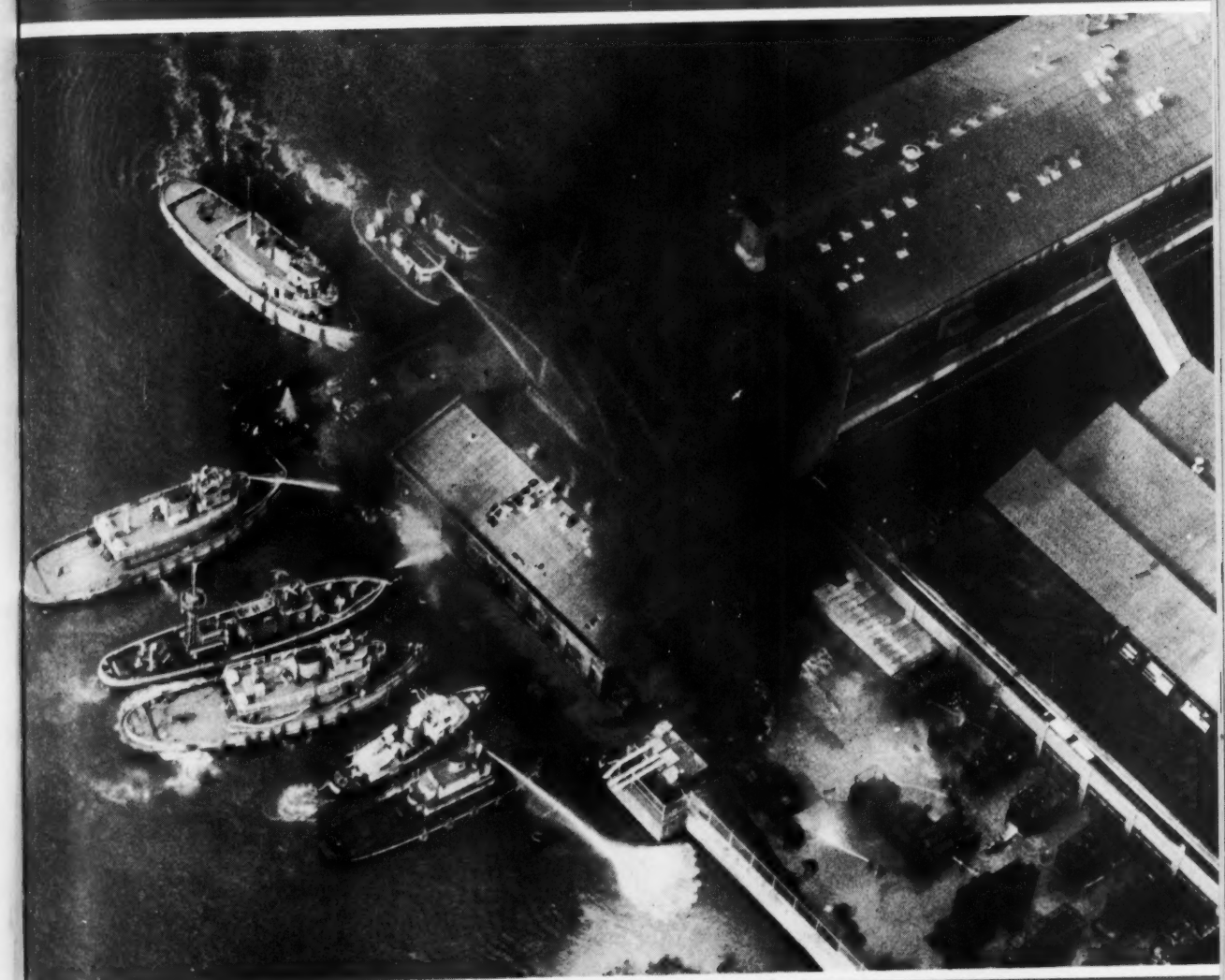
The Journal of the Fire Protection Profession Since 1877

MARCH, 1956



Fire and flood heavily damage Ford Assembly Plant at Long Beach, Cal. See Page 223

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Multiple Alarm Fires Feature Chicago Holiday Season

Freak Flood, Fire Cause Heavy Loss To Ford Plant

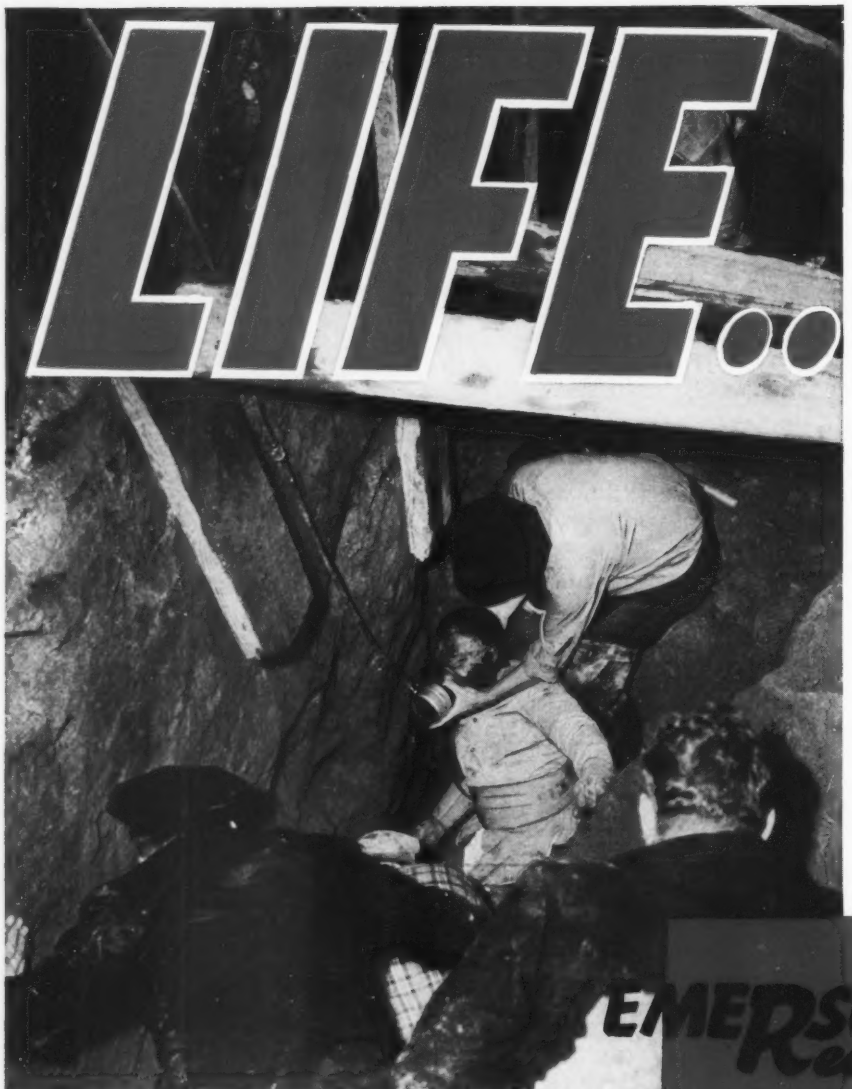


Photo of rescue recorded by The PHILADELPHIA INQUIRER

LINE

to a victim
in a cave-in

. . . or in a
collapsed
building or
mine shaft

. . . trapped
by machinery
or under an
overturned
vehicle . . .

in a tank or
the hold of
a ship . . .

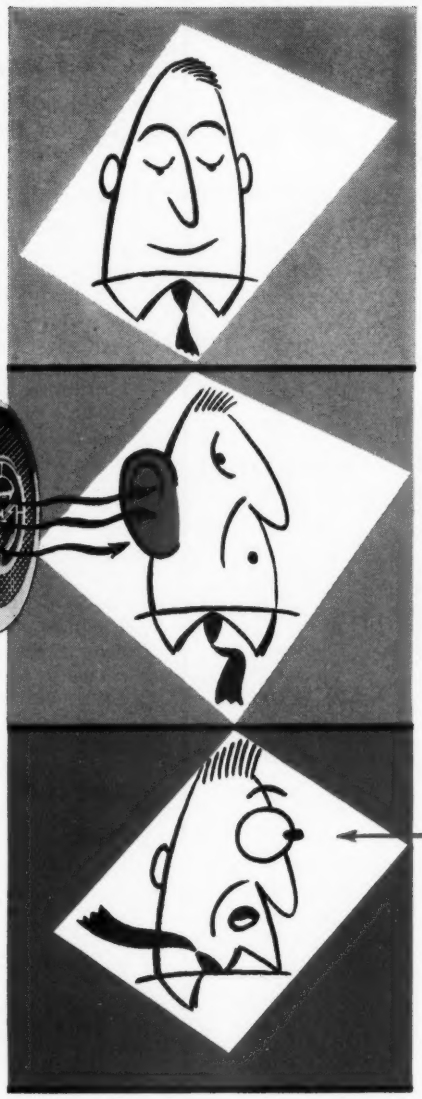
From hundreds of feet away **EMERSON EXTENSION HOSES** can bring the breath of life to trapped victims, saving lives you could not reach with bulkier equipment. They connect instantly to standard Emerson models, and add new life-saving power to the equipment you already have. Ask your Emerson representative, or drop us a line at the factory.

Emersons are **SIMPLE** to operate and **SAFE** for adults, children, or infants. They are **ACCEPTED** by the American Medical Association (since 1942) for use **BY LAYMEN.** They **PROVIDE SUCTION,** alternating with the pressure phase, to give vital aid to the circulation.

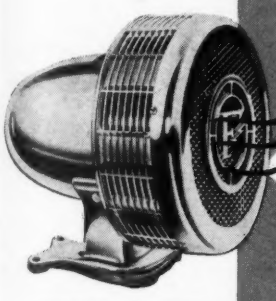
"Simplest and Safest"

J. H. EMERSON COMPANY

88 COTTAGE PARK AVENUE, CAMBRIDGE 40, MASSACHUSETTS



Man is a creature of habit.
Habit makes a man respond involuntarily
to the sound of a siren,
no matter how often he hears it.
Instinctively it means warning or danger.



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Good Habits!

FEDERAL BEACON RAY LIGHT

NOW, in a little over six years,
a new type warning has ingrained itself
into man's subconscious.
Visually, the FEDERAL Beacon Ray
light's lightning-like pulsating beams,
instinctively mean danger,
and habit again makes response
to the Beacon Ray's warning — instantaneous!

T.M.

A FEDERAL Q siren and Beacon Ray light
on your fire apparatus
is your assurance of instant response
to your familiar call for action.

DON'T OPERATE WITH OBSOLETE WARNING SIGNALS.
Equip with a FEDERAL Coaster Siren
and Beacon Ray light, NOW!
Specify FEDERAL on your new equipment.
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FIRE ENGINEERING

VOL. 109 MARCH, 1956 NO. 3

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ONE MAN—ONE JOURNAL

Last month, the 28th Fire Department Instructors Conference was held in the City of Memphis.

This Conference—although he won't admit it—is a tribute to one man, Richard (Dick) Vernor.

Nowhere else in the world will you find nearly 2,000 leaders in fire protection and prevention coming together at their own expense, to sit through 40 hours of lectures, round tables and symposiums, with none of the trappings of a fireman's convention—no parades, no exhibits, no entertainment—*nothing but business,* from 9:23 a.m. Tues., February 21 to 4:30 p.m. Friday, February 24th.

It is a matter of great pride to us that the vast majority of those fire chiefs, instructors, rating board members, and insurance leaders swear by FIRE ENGINEERING just as they swear by Dick Vernor and the FDIC.

In the Councils of FDIC, as in the sessions of the leading fire service group gatherings held from coast to coast, FIRE ENGINEERING is referred to and quoted as not just the nation's leading authoritative publication of the firse service—but as a Journal that makes for *sound, interesting reading* from cover to cover.

We're proud to salute Dick Vernor and FDIC.

The Publishers

FIRE ENGINEERING—A CONSOLIDATION OF FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION AND FIRE SERVICE

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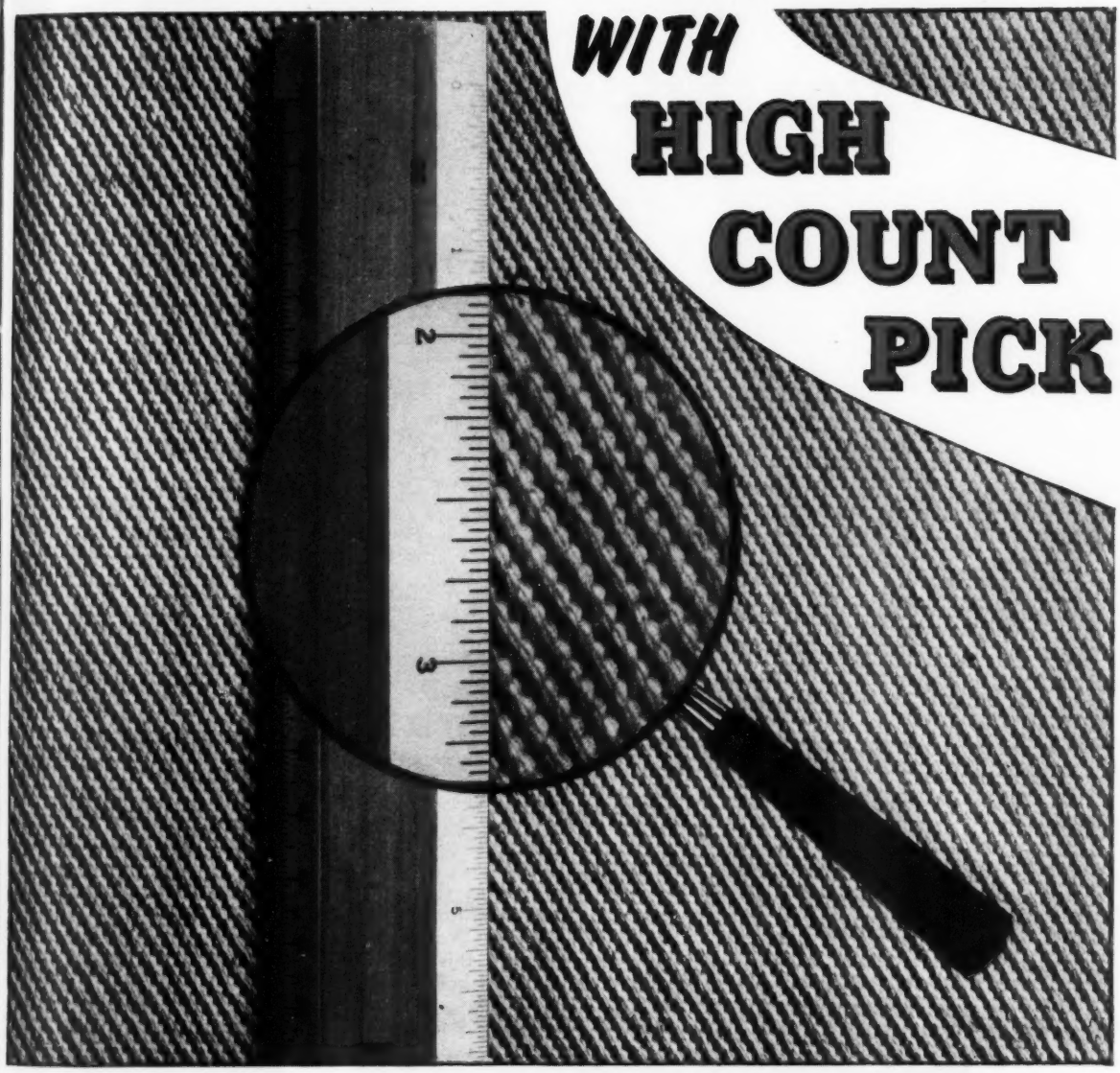
FABRILON

WITH HIGH COUNT PICK



"*Pick*" is the number per inch of filler strands, or those which go *around* the hose. FABRILON has the remarkably high pick count of 12 to 14 per inch. In FABRILON, high pick count means *closely woven twill jackets* which *resist abrasion and snagging* and slide over obstacles with *minimum surface friction.* It also means *smooth texture, ease of handling, high burst* and resistance to *pressure shock* or *water hammer.*

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WARD LA FRANCE 85A 250 H.P. now seeing service in Morrisville, Penna. Ground ladders supplied as standard equipment.

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Now B. F. Goodrich hose has 10 times more mildew resistance

HERE'S the new fire hose that's 10 times more resistant to mildew attack and rotting. It's B. F. Goodrich Flexseal, protected with the exclusive Superseal treatment.

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B.F.Goodrich

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the very best

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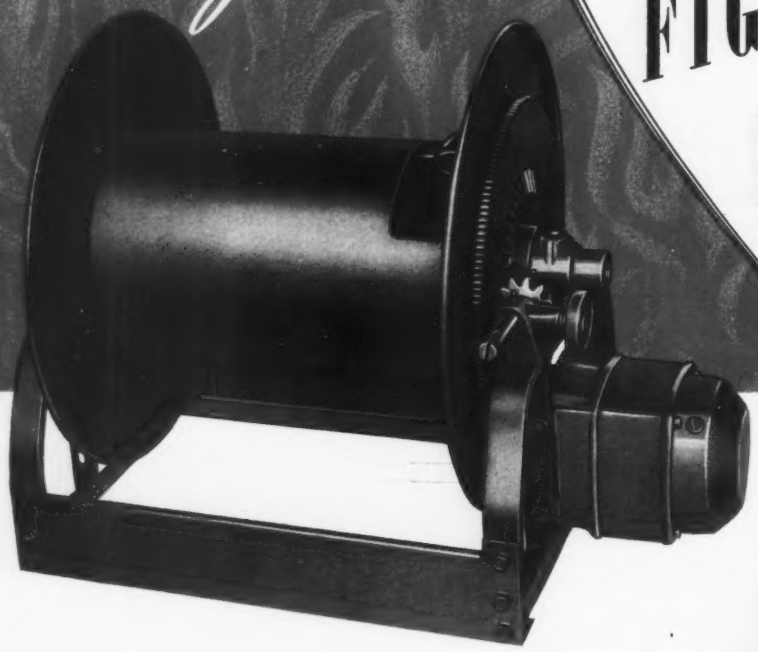

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Precision built
Underwriters'
Approved
Competitively priced

THERE ARE MANY REASONS for the superior performance of Ardmore Fire Fighting Reels — many reasons why it pays to specify Ardmore. Here are just a few of these reasons: Ardmore's explosion-proof motors are of exclusive design, Underwriters' Approved for all electrical systems. These motors are compact, powerful, and efficient. They draw only 70 amps. Direct gear-to-gear drive assures positive power transmission.

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. . . available with AIR or OXYGEN

Improved design, and the selective use of materials to fully meet service conditions put the new M.S.A. Air-Mask in a class by itself.

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...a small attractive demand regulator.

...large, easy-operating, all metal handwheels—longer wear.

...large, well-defined figures on pressure gauge for easy reading.

...the high pressure hose is made of wire-inserted neoprene for increased wear.

...the redesigned cylinder valve connects directly to the cylinder and the improved working parts of the valve provide greater serviceability and less maintenance.

...the compact cylinder frame fits close to the body.

...the nylon harness is easily adjusted and provides maximum strength. It is highly chemical and water-resistant.

...the new color scheme is an attractive dark green and yellow. This striking appearance makes it easier to spot men in working areas.

Write today for complete details on this new M.S.A. Air-Mask . . . you'll be taking a step forward in bringing greater efficiency, safety to your fire-fighting operations.

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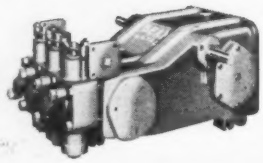
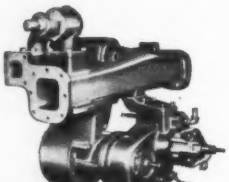
Only the JOHN BEAN HPV* FIRE-FIGHTER has all these features

*HPV — the two-fisted fire-fighter with both High Pressure Fog and Volume pumps (plus John Bean High-Pressure Sno-Foam at low extra cost).

TRUE HIGH-PRESSURE AND MULTI-STAGE PUMPS OPERATE SIMULTANEOUSLY

Operate them together or singly — the John Bean High-Pressure Fog piston pump, delivering 60 GPM at 850 PSI pump pressure — and the John Bean centrifugal volume pump, providing a smooth flow at 500, 600 or 750 GPM.



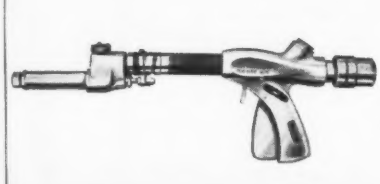


DUAL BATTERY SYSTEM
Auxilliary battery insures against starting failures.

VACUUM-OPERATED PUMP SHIFT
Quick, positive, trouble-free shifting of volume pump.

THE PATENTED JOHN BEAN FIRE-FIGHTER GUN

The fireman has perfect control of stream patterns with this famous gun. Instant on-and-off control of discharge with one hand — other hand rotates barrel for a complete range of fog patterns. Face-protector spray allows fast, close approach to hot fires. Hose extending from back of gun provides straight-flow waterway for best performance and easiest handling.



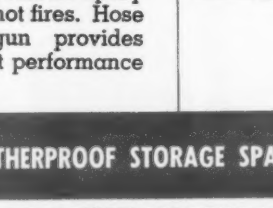
STANDARD TRUCK CHASSI

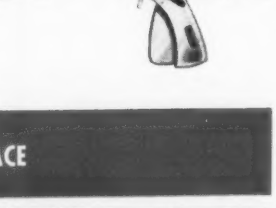
This two-fisted fire-fighter stops fires faster!

The "HPV" gives you two lines of fast-striking John Bean High-Pressure Fog . . . the *original* high-pressure fog . . . discharged from the guns at 600 to 700 PSI nozzle pressure. Only this true high-pressure fog has such effective triple action — to cool, to smother, to isolate flames in seconds — with 90%

OVER 45 CUBIC FEET OF WEATHERPROOF STORAGE SPACE

Four lighted compartments are built in — one tailored for slide-mounted generating equipment; another for portable water pump. Plus a rear compartment for smaller fire department fire accessory tools.





INTERIZED REEL COMPARTMENTS

emovable enclosures win-rize the two reel compart-ents. These, as well as ump, valves, gauges and ntrols, are warmed by en-ine heat.

POWER REWIND HOSE REELS

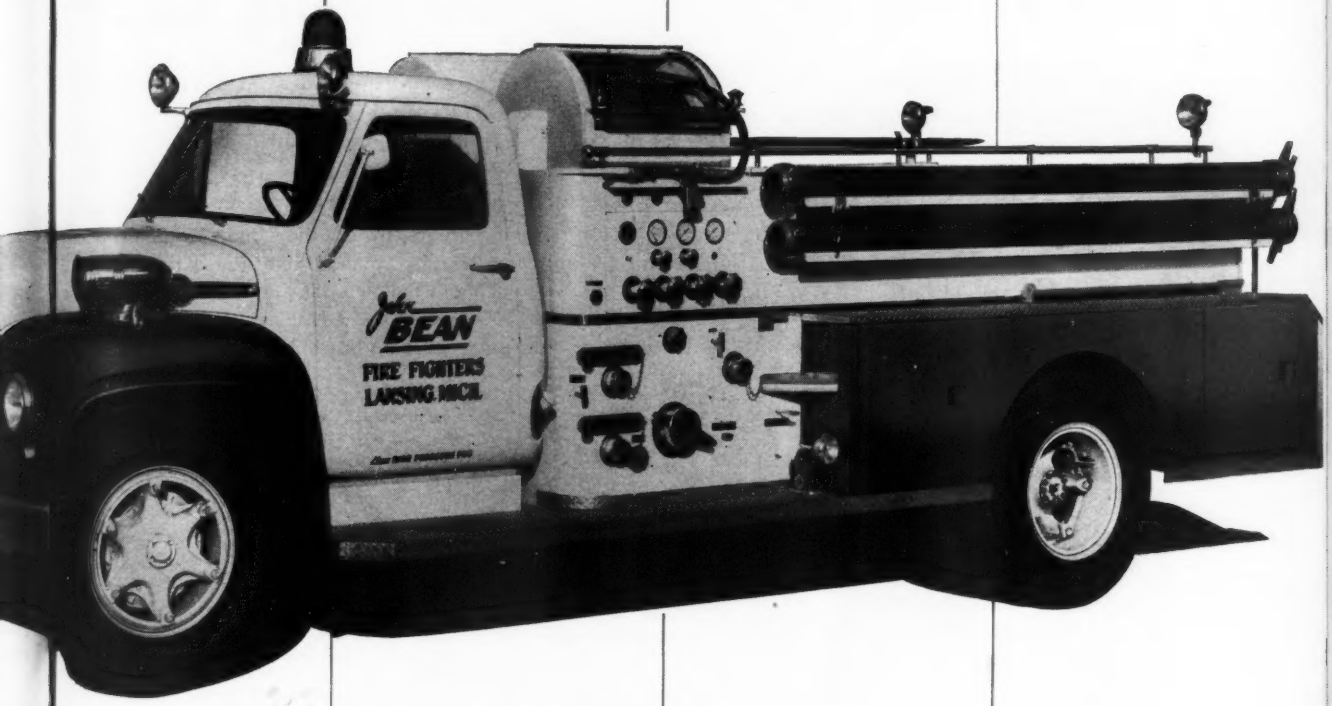
Faster, easier hose pick-up with power operated reels. Hose lays out smoothly and easily over roller guides.

400 FEET OF HIGH-PRESSURE HOSE

The 200 feet of special, 3500 pounds burst test hose on each reel can be easily handled by one man.

SPACIOUS HOSE BED

Smooth, level hose bed is properly ventilated, carries 1200 feet of 2½-inch and 400 feet of 1½-inch volume hose.



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ll gauges, valves and con-ols are centralized for in-ant operation — illumin-ed for safety and easy ading at night.

BONDED-TO-METAL FINISH

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40 FEET OF SUCTION HOSE

Standard equipment includes two 10-foot lengths each of 2½-inch and 4½-inch hard suction hose, complete with hydrant adapters and suction screens.

500-GALLON, 10-GAUGE STEEL TANK

Smooth cornering, starts and stops assured by six-compartment tank with low center of gravity. Prevents undesirable water surge.

John Bean Fire-Fighters can be mounted on most standard truck chassis

less water damage. Fire extinguishing value of water is increased by a ten-to-one ratio — makes the 500 gallons of water on the truck go ten times further.

Add to this, the truck's multiple lines of hard-slugging, Underwriters' approved volume streams and you have an unbeatable combination. Two great John Bean pumps . . . two proven methods of fire-fighting. Use them separately or both at the same time — in any combination. And for fighting grass and brush fires, use high-pressure fog while the truck is in motion.

Because they're designed by firemen . . . men who've fought fire under all kinds of conditions . . . John Bean equipment is designed right for ease of operation. Arriving at a fire, you're in business with four easy steps. Put pump in gear, step out of cab, open valve, adjust throttle for RPM — and presto! your lines are ready for instant action.

The proof is in the doing.

See for yourself what a John Bean HPV Fire-Fighter will do for your community's fire safety. In Lansing, Michigan, you'll get expert instruction and actual practice in volume and high-pressure fog methods at John Bean's Fire-Fighting School. In the meantime, why not contact your local John Bean representative, or write factory direct. In many localities, a demonstration can be arranged for you.

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Dept. 126, Lansing 4, Michigan — P.O. Box 145, San Jose 3, California

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A prize-winning name for a praise-winning nozzle

Now — a nozzle that does everything you want a nozzle to do — and do it more effectively, faster, easier. The new Wooster Vari-A-Fog meets every fire-fighting situation with the right answer right at your finger tips.

You simply dial your stream pattern — from a 90° wide angle right down to a straight stream, in less than one complete turn of the barrel. Positive, click-stop settings give you a full choice of dense fog patterns without hollow spots, and a solid straight stream projection of 125 feet at 100 GPM. Lower GPM streams are available for mop up by turning barrel below straight stream setting.

The 1½" size Vari-A-Fog is regularly available in 3 GPM ratings: (a) 30° fog at 100 PSI — 125 GPM
(b) 30° fog at 100 PSI — 100 GPM
(c) 30° fog at 100 PSI — 75 GPM

THESE ARE THE IMPORTANT FEATURES

1. Chromed hard bronze baffle plate for stream pattern control.
2. Perforated edge for dense, uniform fog pattern — no hollow spots.
3. Non-slip, heavy duty rubber grip extends over nozzle end for sure impact protection.
4. Five positive click-stop stream positions. Straight stream, 15°, 30°, 60° and 90° fog. Mechanism entirely enclosed — nothing to catch — no way to freeze.
5. Smooth, easy turning at all pressures.
6. Rugged and rigid stream setting indicator.
7. Ball Valve shut-off control. Easy acting and non-locking at all pressures.
8. Large, roomy handle for gloved hand operation.
9. Full 1-inch, non-interrupted waterway. Delivers water to discharge without intermediate chamber friction loss.
10. Floating ball action is self-sealing and self-compensating for wear.
11. Strong one-piece body for stability and streamlined appearance.
12. Unique double-stop design provides positive valve alignment in open and closed position.

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Montreal, Canada's largest city, believes in giving its residents and industries the best possible fire protection. Consequently, the municipality carries on a permanent program of modernizing its equipment, with the result that the Montreal Fire Service is today one of the world's most effective fire-fighting forces.

During the past three years, Montreal has chosen Macks for the majority of its new apparatus. This includes seven Mack pumpers, and two Mack-Magirus 100-foot automatic aerials, with two more pumpers and another aerial on order.

Like other fire departments with big jobs to do, Montreal has learned from experience that Macks offer unmatched performance and flexibility to meet the demands of modern fire-fighting and traffic conditions. Their long life and low upkeep make them real money-savers, while ready availability of parts insures standby readiness for action.

Get full details on the apparatus you need from your nearest Mack Branch or Distributor. Mack Manufacturing Corporation, Empire State Building, New York 1, N. Y.

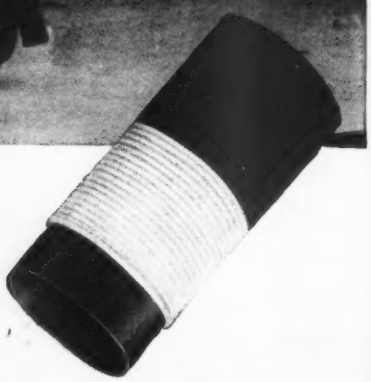
MACK
FIRE APPARATUS

3859

COMPLETE LINE OF PUMPERS • • • SQUAD AND HOSE WAGONS • • • AERIALS • • • COMBINATION LADDER TRUCKS

Quaker

Here's why this PETROCHEM fire hose is on guard throughout this D-X Sunray refinery



Get acquainted with your Quaker-Quaker Pioneer distributor. You'll find him of real help—not only for your regular needs — but also in emergency situations requiring extra fast supply. Write for free brochure and name of your nearest distributor.

This hose does *more* than fight fire. It fights off deterioration by oil and chemicals, stands up to abrasion, resists weather and functions safely under high pressure. Why? Because its oil-resistant Neoprene tube is enclosed in tough, wear-defying *Du Pont Dacron* impregnated with oil-proof Neoprene . . . this provides a tough, light, flexible hose, resistant to oil, both inside and out. Actually this hose is so strong that it can take pressures up to 500 lbs. and temperatures up to 300°F. . . . and so flexible that you can actually knot it. Easy to store, too! Either coiled or folded it takes little space.

These are some of the reasons why D-X Sunray's Oklahoma refinery has this hose . . . the first made for oil and chemical industries, at all fire stations . . . and why it will pay you to consider it in your safety planning. Complete Quaker-Quaker Pioneer line includes hose for every purpose, belting, packing and moulded rubber for every use.

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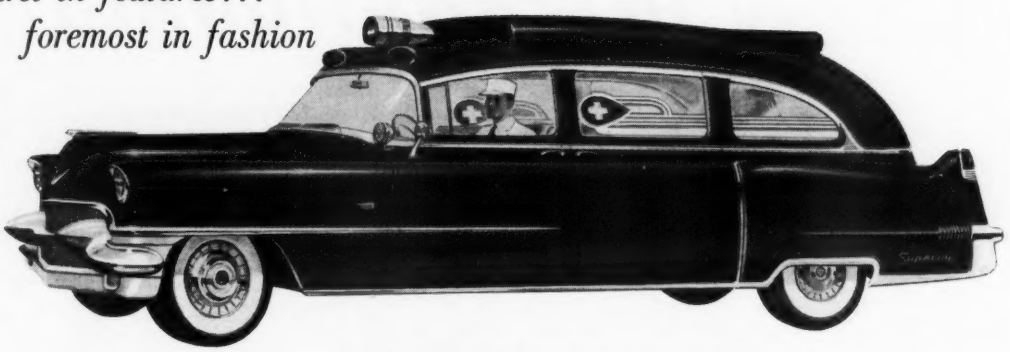
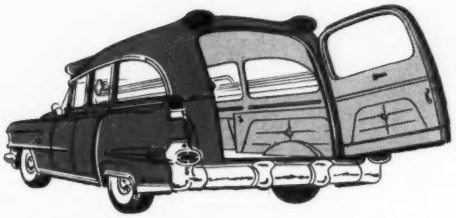
first in features...
foremost in fashion



RESCUER—For exacting emergency work, Superior Rescuer—accommodates 4 patients, provides extra space for auxiliary equipment. Powerful Cadillac powerplant and chassis ensure speed, easy ride for patients. Available in all three body styles.

AMBULANCE—Low (22½-inch) loading height, high headroom, extra-wide door openings simplify patient handling, increase attendant comfort, in Superior Ambulances. Shown in Moderne styling; available also in Limousine and smart hard-top Beau Monde styles.



SUPER-RESCUER—Heavy-duty Super-Rescuer has all features of Rescuer, plus extra headroom, extra storage space. Ample leg room for attendants is provided by foam-cushioned Fold-N-Floor seats. Accessories available prepare rescue squad for every kind of disaster.

READY!
...for every emergency!

First aid, resuscitation, rush hospitalization of the severely burned . . . whatever the emergency may be . . . your new Superior Ambulance or Rescue Coach is engineered to handle every problem—with speed, efficiency, and superlative ease.

No other emergency line offers as full a selection of auxiliary equipment, including oxygen, to ready your rescue group for *any kind of disaster.*

No wonder fire departments, rescue squads, and industrial plants all over America have acclaimed their Superior Ambulances, Rescuers, and Super-Rescuers as their *most essential* rescue equipment.

The next time you choose, choose Superior . . . truly *engineered for emergency.*

See the brilliant new Superior line, *today.*

Superior Coach Corporation, Lima, Ohio

Superior

Chassis by Cadillac

Specialized INTERNATIONALS

for extra fire fighting protection

Just as your firemen are specialists, so are INTERNATIONAL Fire Truck chassis "Specialized" for this particular job . . . designed and built for quick starts, fast acceleration and safe stops —every component specifically built for *extra* fire fighting protection.

INTERNATIONAL Fire Truck chassis save you the BIG money—the over-the-years operating and maintenance money. Every engine and component is made specifically for trucks, with no passenger car adaptations or compromises.

Yet with all this extra value, INTERNATIONAL Fire Truck chassis are competitively priced. Why not contact your nearby INTERNATIONAL Branch or Dealer for all the facts? He will be happy to give you prompt, reliable information.

INTERNATIONAL HARVESTER COMPANY • CHICAGO

In the world's most complete truck line, there is an INTERNATIONAL Fire Truck chassis right for your community. You can choose from 7 rugged medium and heavy-duty models with pumping capacities ranging from 300 to 1000 GPM, plus 3 four-wheel-drive models for off-highway use and 9 METRO® models for rescue work.

INTERNATIONAL® TRUCKS

IH®

All-Truck Built to save you the BIG money!

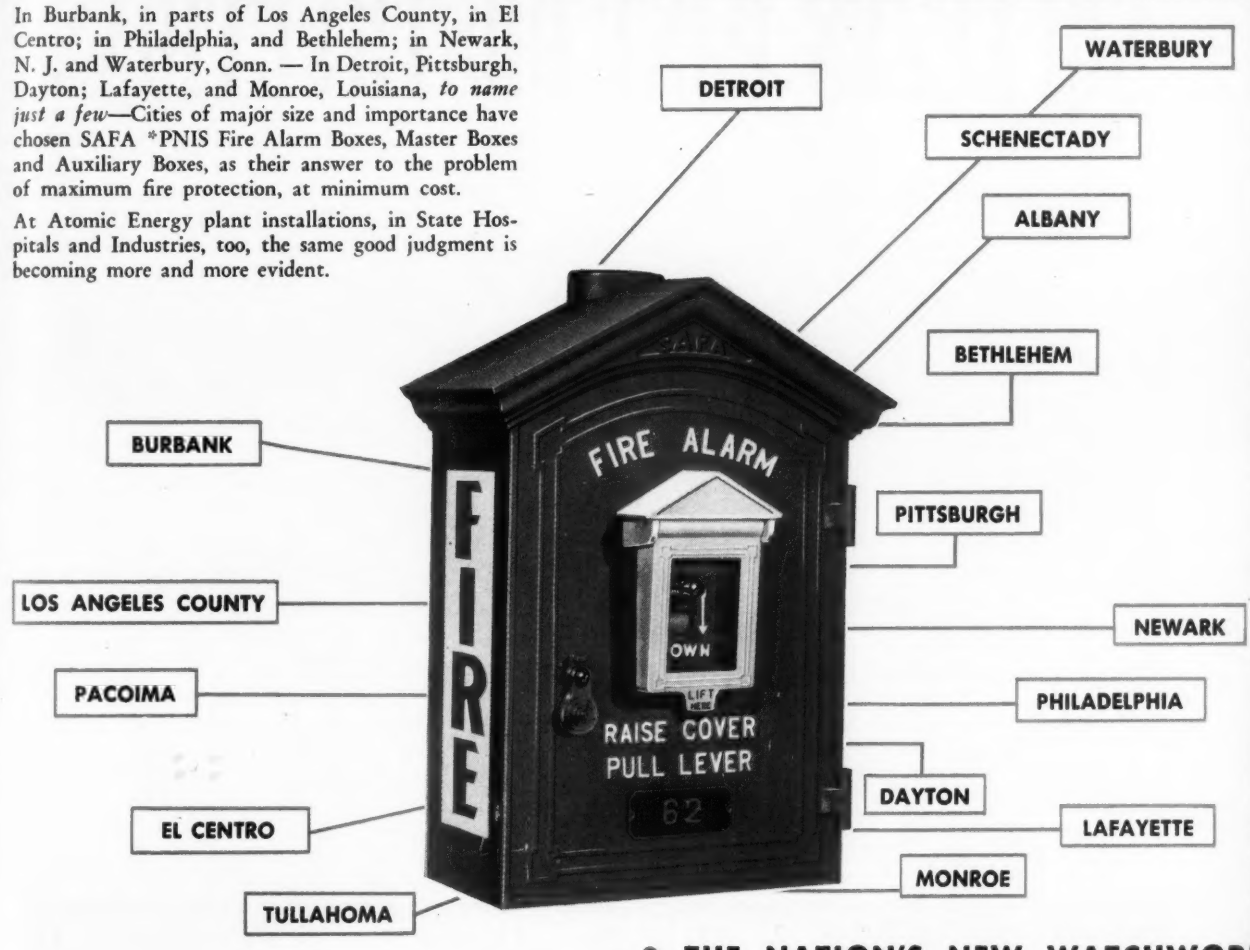
Motor Trucks • Crawler Tractors • Industrial Power • McCormick® Farm Equipment and Farmall® Tractors

FROM COAST TO COAST, NORTH TO SOUTH, AND POINTS IN BETWEEN

— THE TREND IS TO SAFA *PNIS FIRE ALARM BOXES

In Burbank, in parts of Los Angeles County, in El Centro; in Philadelphia, and Bethlehem; in Newark, N. J. and Waterbury, Conn. — In Detroit, Pittsburgh, Dayton; Lafayette, and Monroe, Louisiana, *to name just a few*—Cities of major size and importance have chosen SAFA *PNIS Fire Alarm Boxes, Master Boxes and Auxiliary Boxes, as their answer to the problem of maximum fire protection, at minimum cost.

At Atomic Energy plant installations, in State Hospitals and Industries, too, the same good judgment is becoming more and more evident.



• THE NATION'S NEW WATCHWORD FOR QUALITY, DEPENDABILITY AND SAFETY IN MODERN FIRE ALARM BOXES

SAFA Series 1400 *PNIS fire alarm boxes unerringly signal the need for help in what is indisputably the quickest, surest way to bring fire fighting apparatus into effective action. In the most extreme emergencies the SAFA box stands visibly ready for quick one-hand, single-motion operation. Catastrophe alone can prevent its clear, ungarbled signal from getting through. Neither broken nor grounded circuit interferes. Even interruption by actuation of another box at or about the same time is positively controlled, so that only one clear signal at a time will do its all-important job of registering and locating the danger.

The new design in SAFA's Series 1400 fire alarm box incorporates a low-cost maintenance feature which deserves special consideration: The outer shell of the box now connects securely to a sturdy back plate, from which it can be easily removed for repainting away from location, rather than on location. A spare outer shell is merely substituted, without having to disconnect either conduit or ground wires. Better access to the box-movement is also achieved through this newly developed assembly-feature.

*Positive, Non-Interfering, Succession Type.

Write for detailed information, and the good news about cost.

SAFA ALARM DIVISION, THE *Fyr-Fyter* COMPANY

Executive Offices: Orrville, Ohio

SALES OFFICES — NEW YORK: 2 West 46th Street — NEW ORLEANS: 635 Baronne Street — PASADENA: 740 S. Oak Knoll

SQUEEZES PAST OBSTRUCTIONS

E & J RESUSCITATOR - INHALATOR - ASPIRATOR

E & J RESUSCITATOR • ASPIRATOR • INHALATOR
. . . first name in Resuscitators

ACCEPTED COUNCIL ON PHYSICAL MEDICINE and REHABILITATION AMERICAN MEDICAL ASSOCIATION

When partial obstructions will not yield to aspiration, or when the air passages are swollen almost shut, the exclusive E & J feature "Precision Flow Control" assumes life-saving importance in emergency rescue treatment.
With it the operator can quickly find just the exact flow of oxygen that will squeeze past obstructions short of complete blockage to provide full inhalation and exhalation at a *slow but life-saving rate!*

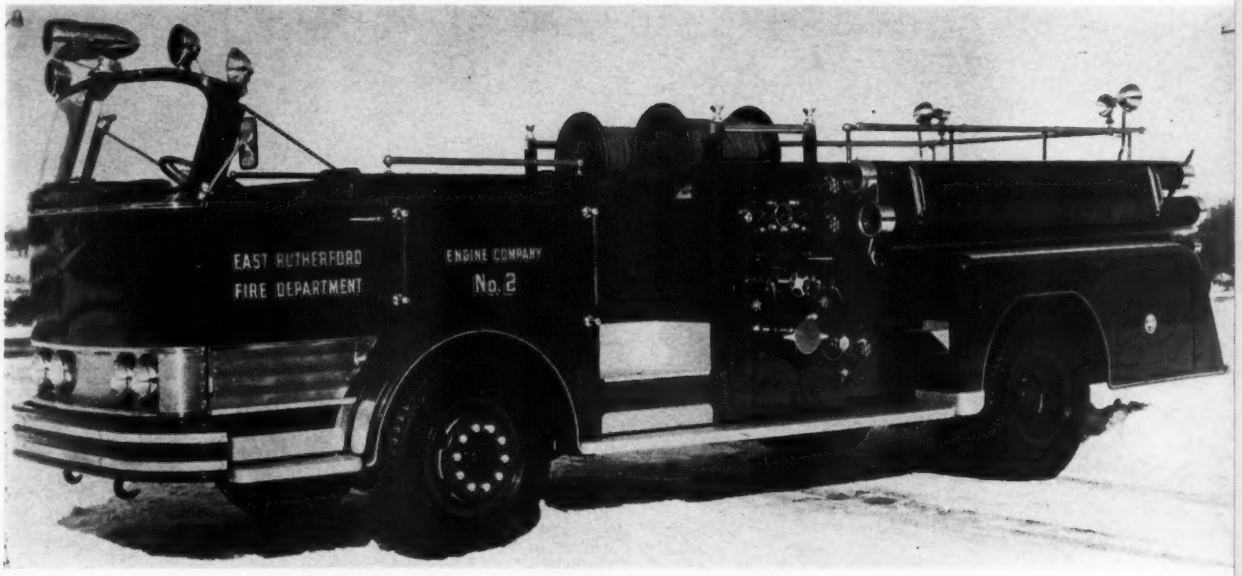
FIND OUT MORE ABOUT THIS VITAL E & J FEATURE . . .
Data and demonstration without obligation.
Write to Dept. 544-7 at address below.

E&J

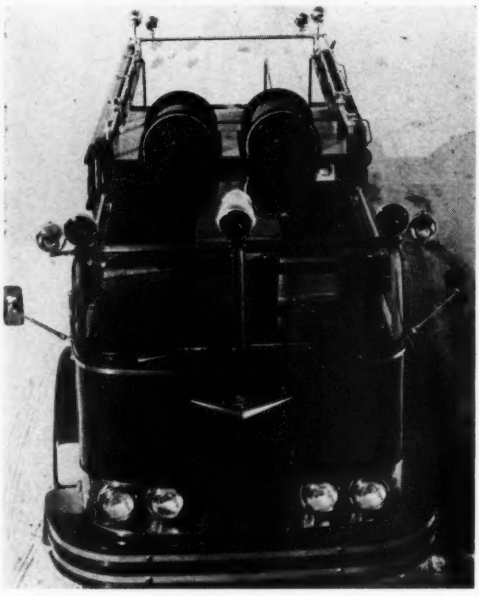
E & J MANUFACTURING COMPANY

100 E. Graham Place, Burbank, California

THE NEW Ahrens-Fox FIRE APPARATUS BY BECK



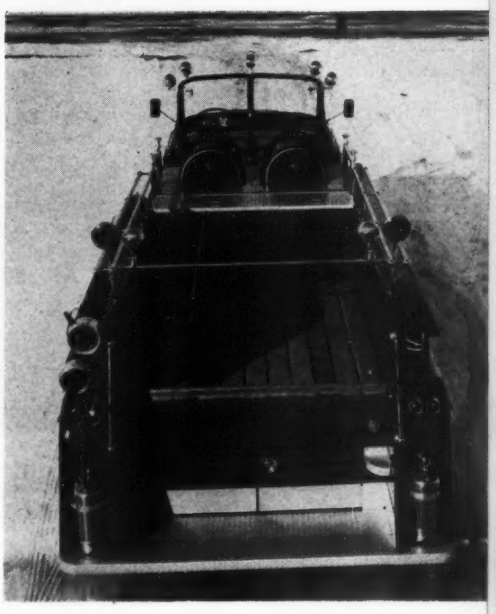
Why you should specify Ahrens-Fox



CUSTOM DESIGNED

CUSTOM ENGINEERED

CUSTOM BUILT



The new Ahrens-Fox pumper is Custom Designed, Engineered, and Built to meet your growing community's needs. Designed with an eye to the future, engineered for years of dependable service, and built to insure the highest standards of quality, Ahrens-Fox is the answer to your fire equipment needs. Ahrens-Fox pumpers are available in sizes ranging from 500 GPM to 1500 GPM.

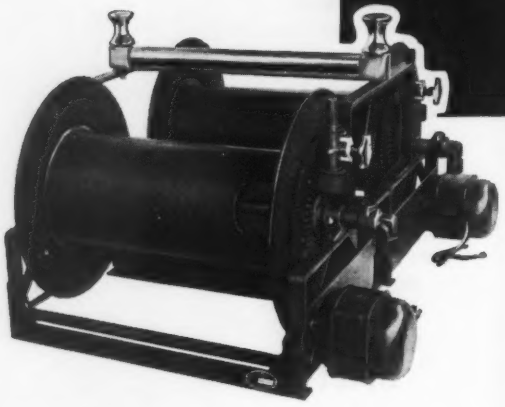
Write, wire or phone for complete detailed specifications and quotations on your fire equipment needs.

C. D. BECK & COMPANY, INC., SIDNEY, OHIO, U.S.A.

When you want the best, SPECIFY...

HANNAY FIRE HOSE REELS . . . HANNAY FIRE HOSE REELS . . .

HANNAY



Built *by* firemen *for* firemen, Hannay Hose Reels have served so faithfully for over twenty years that they are accepted as the standard of quality by thousands of firefighters.

Your men and your equipment deserve the finest. Make sure they *get* it. *Specify* Hannay Fire Hose Reels.

Sustaining Member

Write for free 16-page catalog of complete line.

. . . Greatest Name in Hose Reels **HANNAY**®

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CLIFFORD B. HANNAY & SON, INC., 636 OAK ST., WESTERLO, N.Y.

FOR FIREFIGHTING OR BOOSTER SERVICE the highly portable, light-weight Marlow Fire Pump can be quickly moved to a fire or water source that a pumper can't reach. For fire-fighting, the unit boosts hydrant pressure or pumps from any pond, or shallow well. Small departments can dispatch it to dreaded second fires. For booster service the pump can be carried by two men to inaccessible water sources. The pump pushes water up hills or over long distances to supply pumpers or tank trucks.

marlows are portable

The Marlow Fire Pump, weighing only 160 pounds ready to operate, *can be placed in service 30 seconds after starting!* Powered with an 8½ hp. engine, the unit runs unattended and delivers up to 100 g.p.m. at 80 p.s.i. It can be stored in pumper compartments or car trunks. Meets recommendations of National Fire Protection Association and performance exceeds minimum requirements. For details, see your Marlow dealer or write for Bulletin F-04.

MARLOW PUMPS • RIDGEWOOD, NEW JERSEY

DIVISION OF BELL & GOSSETT COMPANY • *Branch Factories: Longview, Texas • Morton Grove, Illinois*

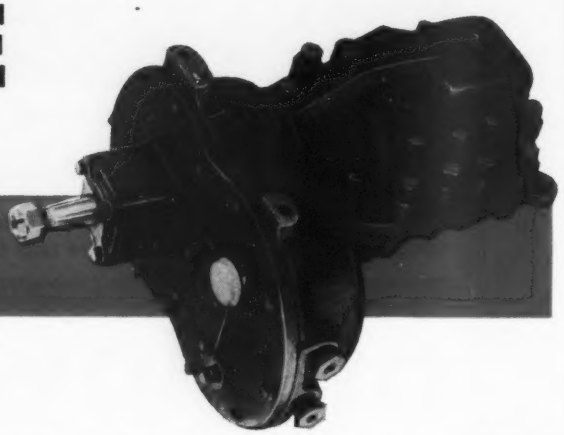
Seagrave Commercial with High Pressure Pump — Toledo Express Airport

Seagrave High Pressure Fog and Foam Smothers Gasoline Fires Instantly...

This is the high pressure centrifugal pump that is making new records every time it goes into action. It gives maximum performance when the truck is in motion . . . 60 gallons per minute at 800 pounds pressure and 40 gallons per minute at 1000 pounds pressure. Produces an abundance of fog and foam when equipped with High Pressure Fog Guns . . . The Seagrave High Pressure Centrifugal Pump is precision machined from all fine-grained bronze. Pump contains four fine-grained bronze impellers and has a stainless steel shaft. It is driven by a standard SAE transmission power take off . . . Now available as an auxiliary pump on Standard Seagrave Pumping Engines, Seagrave Commercial Pumpers and all Seagrave Aerial Ladders.

1881-1956—FOR 75 YEARS—THE GREATEST NAME IN FIRE APPARATUS

SEAGRAVE HIGH PRESSURE PUMP



MAIL THIS COUPON!

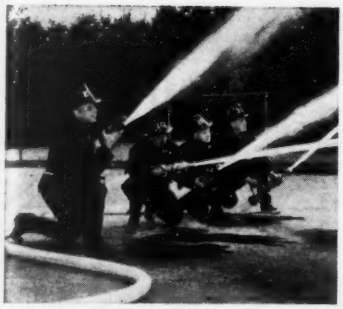
THE SEAGRAVE CORPORATION—Columbus 7, Ohio.

Send us complete information about the Seagrave High Pressure Centrifugal Pump.

Name_____ Title_____

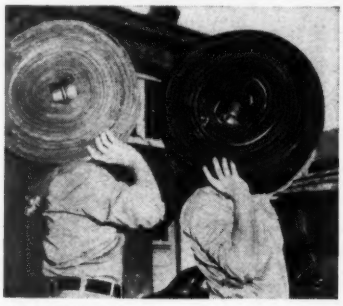
Street Address_____

City_____ State_____

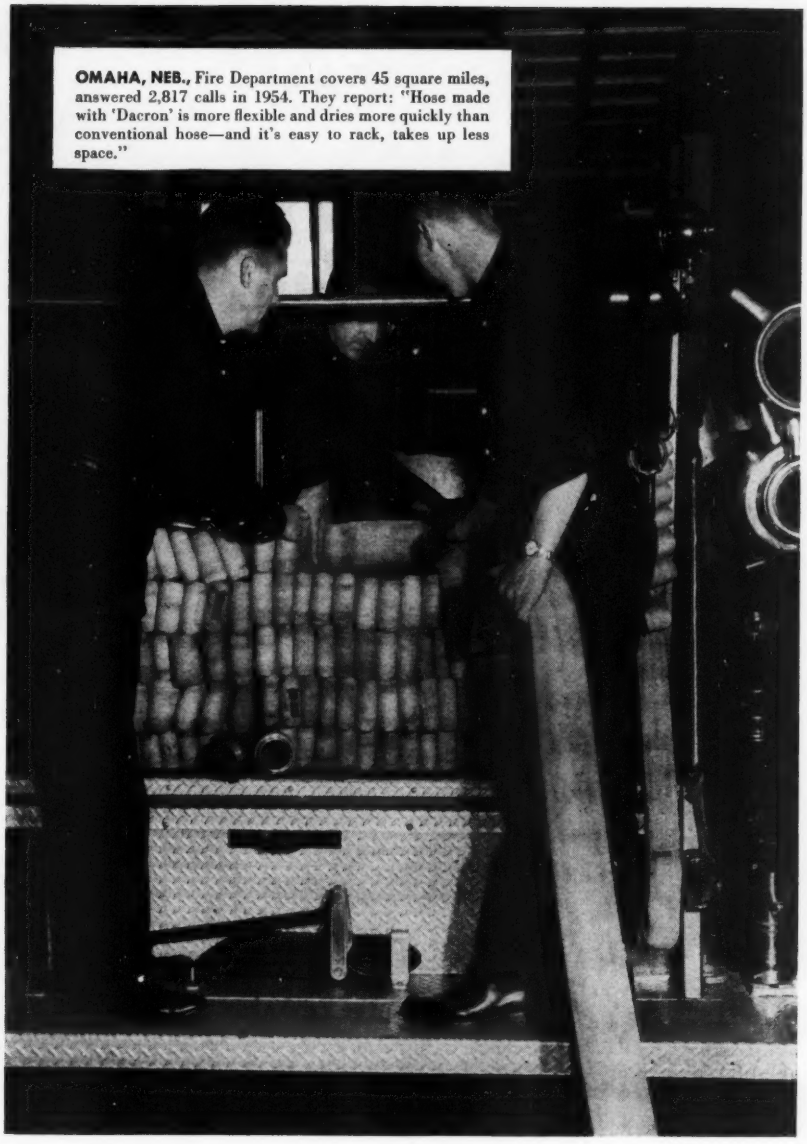


SCHENECTADY, N. Y.—Hose made with "Dacron" is preferred because it gets into action fast . . . gives better all-around performance.

BIRMINGHAM, ALA.—Lightweight, extra-strong hose made with "Dacron" is used because it's easy to handle, easy to carry.



AUGUSTA, GA.—Hose made with "Dacron" is used because it racks and coils in less space. (Hose made with "Dacron" is at left.)



OMAHA, NEB., Fire Department covers 45 square miles, answered 2,817 calls in 1954. They report: "Hose made with 'Dacron' is more flexible and dries more quickly than conventional hose—and it's easy to rack, takes up less space."

Omaha Fire Dept. reports:

"Hose made with DACRON dries quickly, is easy to rack"

REG. U. S. PAT. OFF.

The Omaha Fire Department uses 10,000 feet of hose made with "Dacron"* polyester fiber. Chief Eugene W. Fields reports it gives better all-around performance. Used as the load-carrying "filler" cord that reinforces the hose, this Du Pont fiber makes possible a hose that's light and flexible—yet *stronger* than ordinary hose of the same construction.

Du Pont makes "Dacron" and supplies the yarn to hose manufacturers. The combination of the unusual properties of "Dacron" plus hose manufacturers' skill has resulted in a superior fire hose. Hose made with "Dacron" is made by all leading fire-hose manufacturers. The next time *you* need hose, be sure it's made with "Dacron". E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

ADVANTAGES OF FIRE HOSE MADE WITH "DACRON":

- Lighter
- Stronger
- Dries faster
- More flexible
- Cuts loading time
- Saves space

*"*Dacron" is Du Pont's registered trademark for its polyester fiber*

For Better All-Around Performance Specify Hose Made with "Dacron"

POLYESTER FIBER

DU PONT

REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

BARTON-AMERICAN
Front-Mounted Pump

easier to operate— simplest to install—and superior mechanically!

DELIVERED COMPLETE WITH PTO—READY TO MOUNT—

Save time and trouble! When you order a Barton-American Type UA Front-mounted Pump, just list the make and model of your truck. Your pump will be delivered *complete* with *factory engineered* PTO (power take-off) shaft, universal joints and pump gear ratios best suited to *your* truck's engine.

When you consider *any* front pump *without* complete PTO equipment, you can't be sure the mechanic who mounts it will properly solve the technical problems of torque load, angularity and crankshaft pulley design and installation.

With the UA, however, *you take no chances* on makeshift PTO design or engine overheating caused by improper installation. Even the newest trucks with low fan mountings will be properly fitted.

And simpler installation with factory-engineered drive is just part of the story. The UA Pump also gives you many other superior features—for peak performance and low maintenance.

Write Today for Bulletin 8330-B—and ask about our exclusive Service Pump Plan.

THESE UA PUMP FEATURES ARE WORTH HAVING!

- *Exclusive,* positive interlocking pump clutch that can't slip at a fire.
- Both volume and high-pressure to 400 pounds for effective fog streams.
- Fights fire while truck is moving.
- Fast, reliable, engine vacuum primer.
- Better weight distribution on chassis.
- Effective frost-proof construction.
- Less pump weight—you can carry more water or extra equipment.
- Pump gear ratio suited to *your* engine.
- Convenient controls, top-quality pump materials and precision construction.
- Both simplicity and front location of pump make maintenance fast and easy—a great help to volunteer departments.

P.T.O. DRIVE IS ENGINEERED TO SUIT YOUR TRUCK —ANY MAKE OR MODEL CHASSIS.

AMERICAN-MARSH PUMPS

BATTLE CREEK MICHIGAN

In Canada:
American-Marsh Pumps (Canada) Ltd., Stratford, Ont

1059 ITEMS from a SINGLE SOURCE!

Fyr-Fyter offers you the most complete line of quality fire extinguishers and fire department equipment in the industry!

Fyr-Fyter is the largest single source for Underwriters' approved portable fire extinguishers, fire hose, nozzles, couplings and other brass goods, pumps, clothing, ladders, warning and signaling devices, first aid kits, masks and breathing apparatus! Select from a practically limitless list of extinguishers and equipment that meet all the needs of *municipal, industrial* and *commercial fire departments.*

All of these products are available through Fyr-Fyter sales and service representatives . . . the largest sales force in the industry! They are fire protection specialists with knowledge, experience and training to offer counsel and make recommendations on specific problems. They represent a company that has enjoyed a nationally respected reputation for quality products since 1916.

YOU TALK TO ONE SALESMAN . . .
PLACE ONE ORDER . . . PAY ONE BILL!

TEAR OUT THIS COUPON AND MAIL WITH YOUR LETTERHEAD TODAY!

☐ Send your 40-page Fyr-Fyter Extinguisher Buyer's Guide.
☐ Send your 60-page Fyr-Fyter Accessory Products Catalog.
☐ Send your 16-page Fyr-Fyter Interior Fire Fighting Equipment Catalog.

FF-8

The Fyr-Fyter (FIRE) (FIGHTER) Co.

221 CRANE STREET, DAYTON 1, OHIO

REPRESENTATIVES IN PRINCIPAL CITIES

OUR 40th YEAR OF MANUFACTURING . . . THE MOST COMPLETE LINE IN INDUSTRY

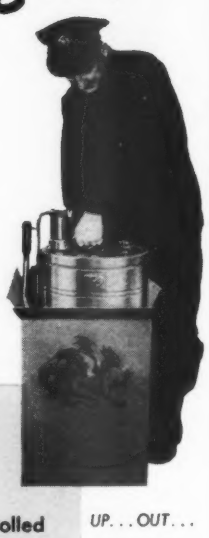
BRANCH OFFICES: NEW YORK, BOSTON, PHILADELPHIA, CHICAGO, ATLANTA, DALLAS, SAN FRANCISCO, PORTLAND, SEATTLE

"This pump fights fire and fatigue!"

Dragon Fire Pumps are designed with the fire-fighter in mind. The special harness makes it easy to swing the pump into place so that it rides high on the back where it can't throw the fireman off balance or interfere with walking or climbing.

Just a few easy strokes of the pump lever give a *continuous* flow of water the operator can direct right where it does the most good—a mere twist of the shut-off nozzle gives him either solid stream or spray *instantly*. What's more, he can take his hands off both shut-off nozzle and pump lever to use rake, shovel, or other tool. This all means more efficient fire-fighting *with less fatigue*.

A Dragon Fire Pump comes completely assembled and requires little maintenance. There is no pump packing to dry out: even after standing idle for long periods, the pump is ready for instant use.



UP . . . OUT . . . READY FOR ACTION!

PARCO PRODUCTS COMPANY

PENNSBURG, PENNSYLVANIA

Dragon FIRE PUMPS

now available in 2 models

No. 150-S—Stainless Steel Tank

No. 150-G — Galvanized Tank: Cold-rolled steel, hot-dipped galvanized after fabrication.

All units equipped with brass pumps; all tanks seam welded. Capacity 5 gallons

DRAGON FIRE PUMPS meet Underwriters' Laboratories requirements and can be supplied with the UL label of inspection attached.

VALUABLE DISTRIBUTORSHIPS AVAILABLE, WRITE TODAY.

Cut interference, save air time, multiply radio usefulness with new General Electric Personal Channel selective calling systems

New Progress Line Personal Channel Systems provide two-way radio users with individual calling, automatic recall or "leave a call"—make possible group calling with personal communication between dispatcher and driver after the call is placed.

Your two-way radio dispatcher can call or signal your drivers individually, with a new G-E Personal Channel selective calling system. He pre-selects the individual driver to be called or signalled by means of push buttons. Transmissions, with or without the electronic tones which provide the individual calling or signalling function, are made by pushing either of two push bars on a desk console.

With G-E Personal Channel individual calling built into two-way radio systems, dispatchers can call each driver—drivers need hear only calls beamed to them. Away from vehicles, drivers may automatically be recalled to the radio by a flashing light or sounding horn. If beyond range of the recall message, a signal automatically remains lighted on the radio control unit until the call is answered.

With a fleet equipped with Personal Channel group calling, drivers hear only calls from their own dispatcher. When the individual called answers the dispatcher, conversations then may become private.

New Progress Line Personal Channel Systems, for individual or group calling, effectively eliminate most of the nuisance interference due to crowded channel conditions. Both systems virtually eliminate bothersome "skip" interference from distant stations.

Present users of G-E all-electronic selective calling systems report increases up to one-third in useful air time. The ability to recall, or "leave a call", saves air time previously wasted when dispatchers repeated calls for drivers away from their vehicles.

NEW DEPENDABILITY

New G-E Personal Channel Selective Calling Systems now provide the highest possible reliability of operation. A new, simplified, electronic tone receiver selects proper tones in a more exacting manner than ever before. Limits within which the receiver will accept proper tones are dependent upon BOTH amplitude and frequency. The tones accepted must have the right amplitude as well as the right frequency.

Operating ranges of present two-way radio systems are not impaired by the addition of Personal Channel Selective Calling Systems.

All Personal Channel equipment can be incorporated within a single Progress Line mobile unit case, with the same cost-saving, interchangeable plug-in chassis feature provided in all Progress Line equipment.

Your General Electric Communications Counselor is ready now to recommend the G-E Personal Channel two-way radio system which will best serve you. For more information call him, or write: *General Electric Company, Communication Equipment, Section X5936, Electronics Park, Syracuse, New York.*

Progress Is Our Most Important Product

GENERAL ELECTRIC

MIDWESTERN

Safety Clothing for FIREMEN

The Original
STRIPED SAFETY COAT

- ☆ ***New Yellow Rubber Stripes!***
- ☆ ***Maximum Visibility!***
- ☆ ***Maximum Durability!***
- ☆ ***Exclusive Safety Features!***

YOU deserve the BEST PROTECTION OBTAINABLE for your hazardous work of protecting life, and property against fire. The Mackinaw Safety Coat with new yellow stripes is the answer! Highly visible stripes are rubberized as part of the material . . . not painted, glued or sewed on. Tests indicate that the new yellow, like black, retains its natural color and has the same durability.

There are many imitations but no substitute for the superior quality, design, fabric texture and safety features you get by specifying MIDWESTERN!

MIDWESTERN
COMBINATION SAFETY SUIT

The Midwestern Rubberized Coat and Bunker Pants make it easy for firemen to keep both warm and dry even in the most severe weather. Close fitting collar and elastic inner sleeve keep out sparks and water. Detachable wool lining. Pants have double-stitched seams, reinforcing rivets at points of strain, large roomy pocket space.

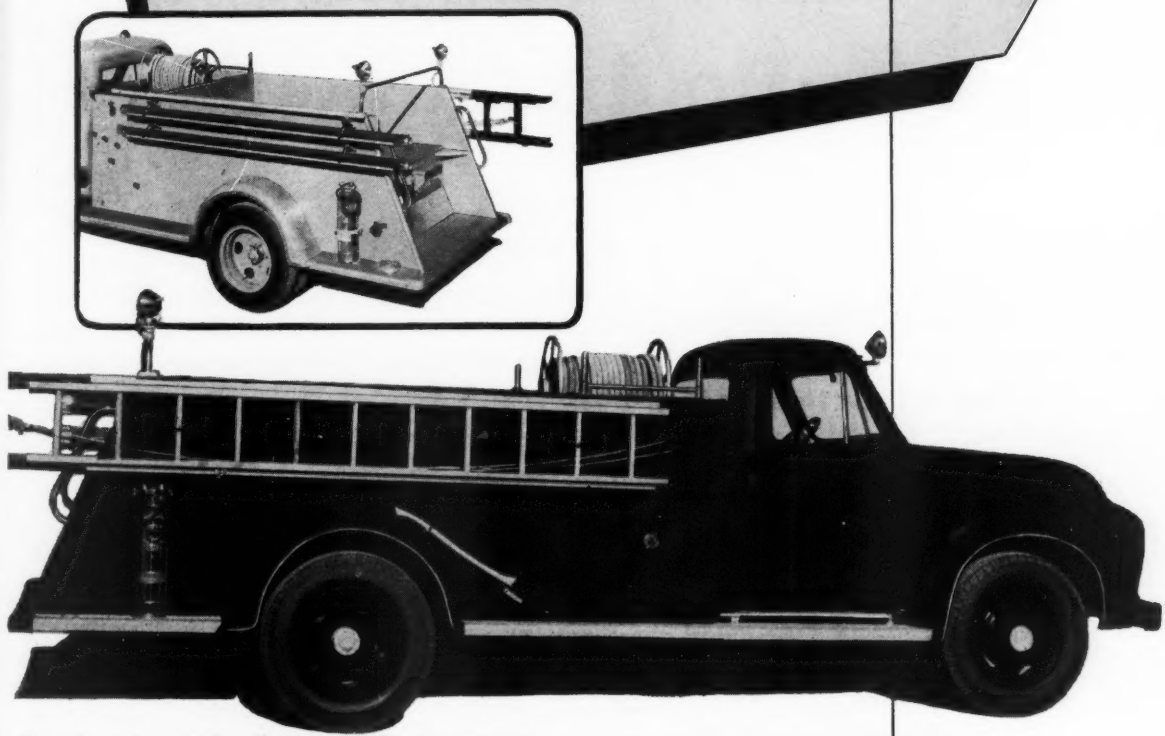
For complete information on our full line of safety clothing for firemen, see your Midwestern dealer. A letter to the factory will also bring you literature and materials for your inspection.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN SAFETY MFG. CO. Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Safety Coats**

A DEPENDABLE TANKER with a reasonable price tag!



Fire departments in all parts of the country are praising the Boardman Tanker for its dependable rural service. This tanker is equipped with a 500 gallon tank (standard model) and the famous Waterous Pump. There's a combination that will really deliver—and at a pressure, too.

In addition, the Boardman Tanker fights grass and other running fires while in motion—a big factor in rural fire fighting.

When it comes to money, the Boardman Tanker really shines. Its low initial cost results from the use of a standard truck chassis. The make and model is up to you. This standard chassis also means lower repair and maintenance cost.

Let Boardman send you complete information, including literature and prices. There's no obligation, and you'll have all the facts. Write today sure!

THE BOARDMAN CO.
OKLAHOMA CITY
1401 S.W. 11TH
BRANCH OFFICE: TULSA, OKLAHOMA

A FEW CHOICE DEALER TERRITORIES AVAILABLE!

All New!

American's 100% Dacron* Single or Double Jacket Hose

FOR MUNICIPAL CONSTRUCTIONS, AS WELL AS LIGHTWEIGHT FORESTRY HOSE.

You get all these advantages—

High burst
Quick drying
Lighter weight
Abrasion resistant
Mildew and rot resistant
Acid and alkali resistant

LONGER SERVICE LIFE—With this improvement you get the full benefit of American's longer-lived tube under the most severe conditions. Tube life of 20 to 30 years is not uncommon with American's laminated construction.

This 100% Dacron jacketed hose is offered as an addition to our cotton rubber lined hose, and hose using Dacron in filler cords of jacket.

Order NOW from your dealer or write us for details.

AR41

Factory & General Offices: • 1145 Park Avenue • Oakland 8, California • Phone OLympic 2-0800

SEATTLE • PORTLAND • SAN FRANCISCO • LOS ANGELES • BOISE • ST. LOUIS • SALT LAKE CITY

*DuPont trademark

ROCKWOOD ALL-PURPOSE FOAM can be used to blanket fires in alcohols, ethers, esters, ketones, as well as petroleum products.

Now... one FOAM extinguishes both petroleum and alcohol fires

New Rockwood All-Purpose FOAM does the work of two products. Simplifies training of fire fighting personnel and cuts down fire protection inventory. Rockwood All-Purpose FOAM quickly puts out fires in alcohols, ketones, ethers and similar water soluble materials as well as petroleum derivatives.

Rockwood All-Purpose FOAM reduces fire protection equipment for fire departments and plants which must deal with more than one type of fire hazard, and is ideally suited for Rockwood's SpotPROTECTION or fixed piping systems.

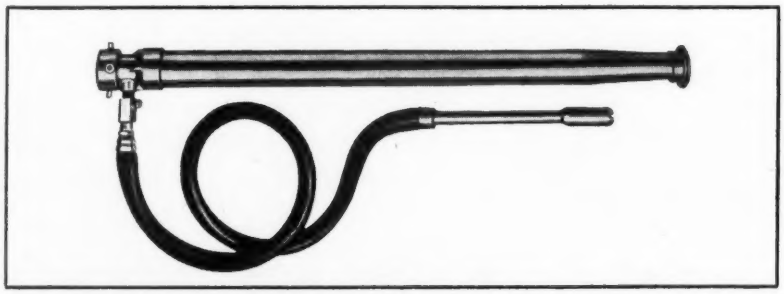
Rockwood All-Purpose FOAM is well suited for use by municipal fire departments, oil refineries, distilleries, chemical and other industrial plants.

Rockwood All-Purpose FOAM liquid with standard Rockwood FOAM nozzle provides the simplest, fastest means for extinguishing alcohol, solvent fires. The FOAM nozzle attaches to a hose connected to the discharge gate of a fire truck, hydrant or interior hose station.

Specify new Rockwood All-Purpose FOAM, put this versatile fire fighter to work for you.

ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses



1½" STANDARD FOAM NOZZLE AND PICK-UP TUBE discharges 60 g.p.m. at 100 p.s.i. Range: approximately 55 feet.

SEND FOR THIS INFORMATIVE BOOKLET

ROCKWOOD SPRINKLER COMPANY
Portable Fire Protection Division
1030 Harlow Street
Worcester 5, Mass.

Please send me your illustrated booklet on Rockwood fire fighting products.

Name.....

Title.....

Company.....

Street.....

City.....Zone..State.....

A pretty girl on a windy day commands immediate attention

...and so do 1956 MILLER Ambulances on any day!

If you want the people of your community to be aware of the merciful ambulance service which you are providing, watch their heads turn when your name plates appear on the 1956 Miller Ambulances on the Cadillac chassis.

Both the *Standard* and *First Aider* models are available with equipment of every description for the purpose of saving lives and making patients comfortable. Write us and we will show you why Miller Ambulances command favorable attention and make a lasting impression.

Remember—

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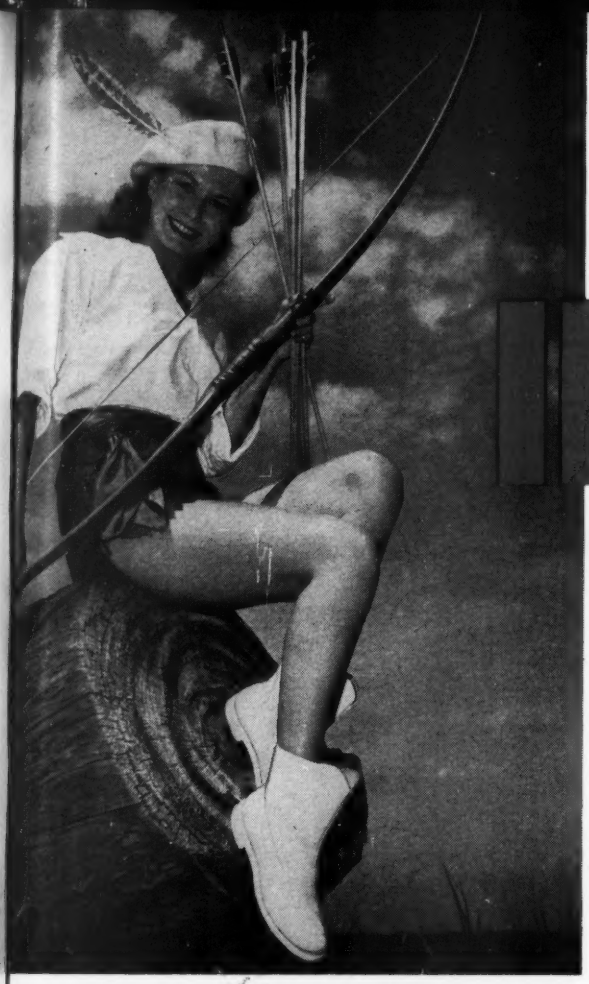

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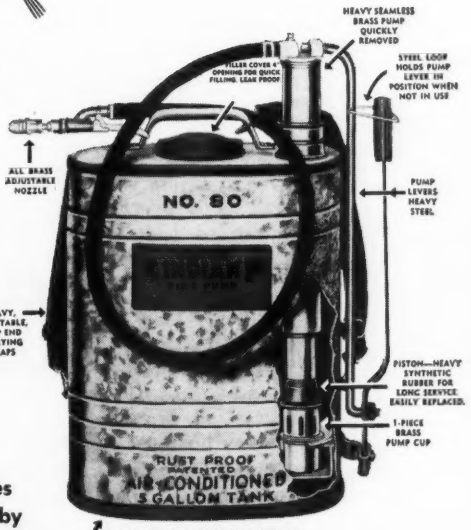
No. 80 LEVER TYPE PUMP and HANDLE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PUMP LEVERS HEAVY STEEL
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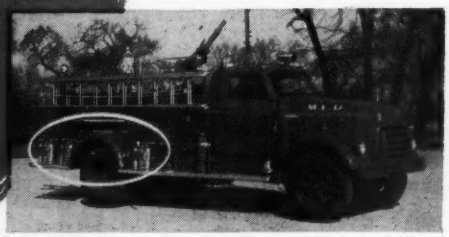

Fire Truck built by W. S. Darley & Co., Chicago, Ill., delivered to Manila Fire Dept., Republic of the Philippines. Note INDIAN FIRE PUMPS mounted.

"We have 6 of your **INDIAN FIRE PUMPS** on one of our fire trucks and we have used them 8 years. They are still **just like new.** They are the best things a county fire department can have. I have used them for everything, including grass, house, barn and many other kinds of fires. We like them very much. **There is nothing else like them.**"

EARL L. KOCH, Assistant Chief
Ann Arbor TWP F. D.,
Ann Arbor, Mich.

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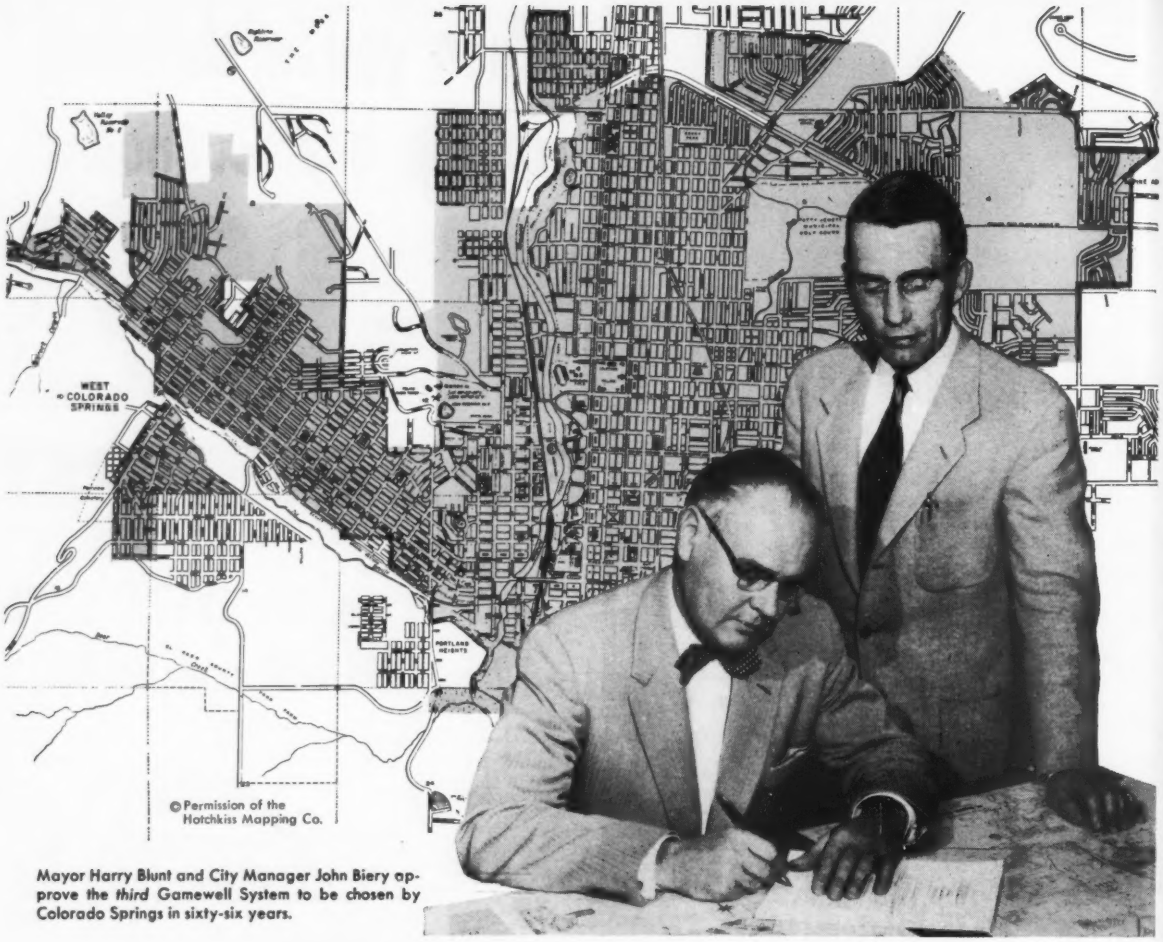

Mayor Harry Blunt and City Manager John Biery approve the *third* Gamewell System to be chosen by Colorado Springs in sixty-six years.

Colorado Springs Buys Third Gamewell System

City-wide survey basis for specifying municipally-owned coded fire alarm telegraph network.

That faithful red fire alarm box on the corner is growing hand-in-hand with Colorado Springs. The original Gamewell System was installed in 1889, followed by a second system in 1914. The third, now being installed, was selected after an exhaustive cost and safety comparison with voice-type service.

Gamewell helped Colorado Springs expand its fire protection to meet modern growth and high value concentrations by making a city-wide survey in 1954. The detailed report, with maps, costs and recommendations, showed how a coded telegraph system gives the entire community, *safe*, fast and reliable alarm facilities to meet all their needs exactly.

Call for a Gamewell Survey

Don't fall behind the growth pattern of your city. A Gamewell Survey can pin-point — and anticipate — alarm system requirements. Use it to get up-to-date and stay up-to-date . . . a Gamewell fire alarm system costs less and gives maximum protection.

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Remember — a Gamewell System is
FIRST when SECONDS Count!

GAMEWELL®

THE BOX IS POSITIVE
Reduces Human Error

FIRE ENGINEERING

VOL. 109, NO.3 MARCH, 1956

The Fire Department Ambulance—What Trend?

Rarely does any public service activity win such universal acclaim as has the operation of ambulances by fire departments. Possibly this is because it represents an extracurricular activity by men who do the work without asking compensation therefor, and whose chief reward is the satisfaction of aiding those in need of help in an emergency.

That ambulance service is a permanent addition to the fire service must be the conclusion of those who have seen the public's reaction to life-saving accomplished by skilled fire department ambulance crews.

And when skilled physicians praise the work of these men without reservation, when they recount the multitude of lives saved by prompt and intelligent operation by firemen trained in first aid, and when the public itself boasts of the speed and competence of the volunteers, there's not likely to be any dropping of the service.

Although the greatest benefit from fire department rescue and first aid operations accrue to the small community having no other ambulance service and no hospital, its value in the larger ones is also being recognized. The promptness in dispatching units—a trait so thoroughly established among those organizations which fight fire—has led at least one big metropolis to place the dispatching of ambulances from all hospitals under the fire alarm telegraph bureau. This promptness, plus the thorough training of personnel, is a factor which is making the fire department ambulance unit an equal of the private unit in the large city.

While there are an estimated 1500 ambulances at present being operated by fire departments in this country, the number is continually growing. And the rate of growth accelerates as their value becomes known.

From the standpoint of the fire department, ambulance operation produces many benefits. First, there is the public relations angle. Fire chiefs are agreed that providing ambulance service is a good will builder without peer. And the good will so engendered on the part of the public eases the problem of financing the department. Some fire chiefs report that as a result of the popularity of the ambulance service, they have never been turned down by their respective municipalities on any request for new apparatus or equipment they have made.

Furthermore, the advent of an ambulance in a fire company stimulates company activity, increases interest of volunteers in their units, provides more worthwhile work for the men and builds morale of the company. Increased prestige engenders pride in the organization.

Of course, the presence of an ambulance at a fire, manned by capable first aid men, provides protection for those engaged in fire fighting operations.

About the only dissident comments on fire departments providing ambulance service are that it may reduce the number of men available for fire fighting, and that it may sometimes develop criticism when someone has to wait for a fire department ambulance.

These points are outweighed by the tremendous benefits brought about by giving the public this "bonus" service.

The article on fire department ambulance service, appearing elsewhere in this issue, and based on a survey of one hundred and eighty-two departments maintaining such service, is well worth careful study.

Fred Shepard

EDITORIAL DIRECTOR

Ambulances and squad wagon of Rescue Squad No. 1 of the Alexandria, Va., Fire Department. Ambulances are Miller-Cadillacs

Experience of 182 Fire Departments Proves . . .

Ambulance Service—An Asset

NOT ALL FIRE departments can maintain an ambulance service for the public. Nor is there a demand for such service in the average large city. The large city with its big hospitals and, in many cases, private ambulance services, has no need for such service as rendered by volunteer and small paid fire departments. However, in communities where there are no large hospitals, and no private ambulance service is possible because it is frequently unattractive from a financial standpoint, volunteer fire departments have provided a service which has proven exceptionally popular with the public.

Such has been the experience of volunteer and paid fire departments from coast to coast.

In order to determine the scope of fire department operated ambulance service, this journal recently made a survey of some 182 cities and towns in which fire departments ran ambulances. The results of that survey are presented herewith.

The 182 fire departments included in this survey run a total of 257 ambulances.

While the majority of such ambulances are operated by volunteer fire departments, a large number are maintained by small paid departments. The need for conveyance of injured or seriously ill persons from small communities to large hospitals in neighboring cities has always been a problem. Because the average small department is organized to save life and property, it was natural that ambulance service should find its way into the fire service.

Of course, there are exceptions, and there are a few large cities in which ambulance service is maintained by the fire department, even though large hospitals are available. Notably among these are Chicago, Ill., and Baltimore, Md.

Although maintaining an ambulance service represents a large increase in the work of the small department, benefits produced by this activity far outweigh the additional labor entailed.

The addition of an ambulance to the fire equipment of a city is not confined to the purchase of such a unit and maintaining it.

A qualified crew must be trained in first aid, and it is here that the greatest benefits of the ambulance service are attained.

In 178 out of the 182 departments reporting, the men are given training in the various stages of first aid ranging up to advanced Red Cross training. First aid, in small departments, has resulted in additional work for the men, but this increase in their responsibilities has proven a very effective means of maintaining and developing interest in the fire service, particularly by the volunteers. Possibly the greatest benefit the fire service receives from ambulance activities is the appreciation shown by the public for this work.

While it not only builds good will for the fire service, it also provides satisfaction to the men from helping others in trouble.

No activity of the fire department receives greater publicity in the press, and otherwise, than first aid and rescue operations. Successful first aid builds pride in an organization and boosts the morale of the department. It raises the prestige of the fire department in the eyes of the public and builds confidence in the fire fighting profession.

As a public relations activity, ambulance service stands second to none. No enterprise is more productive of public good will than ambulance service.

In addition, it develops better support of the fire department by the community, and makes raising money

or securing appropriations easier, and invariably results in better working conditions in the case of paid fire departments.

From the standpoint of the fire fighter, the maintaining of an ambulance provides better protection for the men operating at fires.

The presence of an ambulance at a fire is an assurance that in the event of injury, the men will be given prompt and capable attention.

In certain departments the ambulance service provides a source of revenue, although there are relatively few departments in which the income from fees, ambulance association memberships, and other charges equals the cost of operating the ambulance.

The survey of 182 cities listed the following benefits which accrue to a fire department from operating an ambulance service. The benefits listed are in numerical order as reported by the fire chiefs participating in this discussion:

A very effective public relations activity
Building good will for the fire service
Better protection for firemen at fires
Satisfaction from helping others in trouble
Good publicity for the department
Develops more company activity, and keeps firemen busy
Builds pride in organization
Boosts morale of the department
Raises prestige of the fire department
Builds confidence in the fire department
Builds better financial support for the fire department in procuring new apparatus, equipment and better working conditions.

Fees for ambulance service

An analysis of the replies submitted indicates 128 cities make no charge whatsoever for rendering service within the city, while 53 make a charge in some form or other.

For out-of-the-city runs, 70 of the communities make a charge, while 83 do not. Eleven cities report that they give no service outside of the city.

Seven indicate that service is provided only for members or their families.

As to whom ambulance service is available, the survey indicates that 139 fire departments provide service to all in the city and to those within a reasonable distance from the city.

Fourteen provide ambulance service only to those within the city limits, while 14 report they also provide service for emergency and charity cases both in city and nearby areas.

In answer to the question "Do you believe ambulance operation to be a worthy and appreciated activity?" 176 reported "yes." Four reported that they were not so certain whether it was appreciated or worth while. Thus the opinion in favor of operating ambulances is almost overwhelmingly in favor of the practice.

Financing ambulance service

An analysis of the 182 fire departments reporting in this survey show that the ambulances were purchased by the following:

City appropriation, 79
Donations and public subscription, 59
Call fees, ambulance association memberships, affairs staged by fire departments, etc., 22
Purchased by service clubs, American Legion and other organizations, 17
Purchased by hospitals, 2
Purchased by Community Chests, 2
Purchased by county, 1

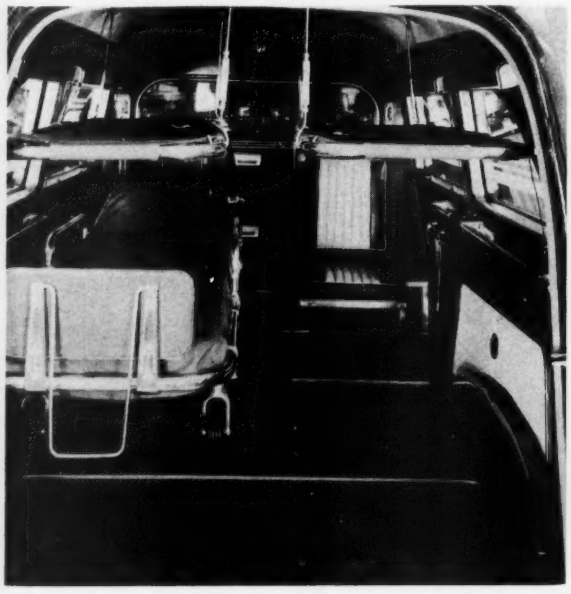
As far as maintenance is concerned, the practices regarding maintaining the ambulances in the 182 cities were as follows:

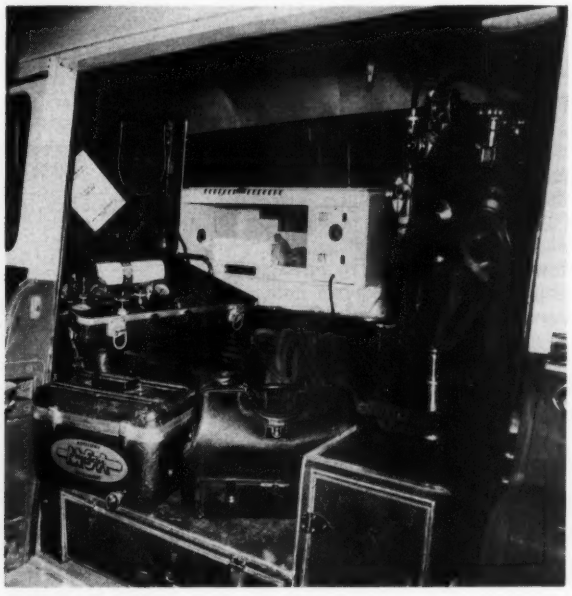
Maintained by the city, 130
Call fees, ambulance association memberships, affairs staged by fire departments, etc., 31
Public subscription and donations, 17
American Legion, 1
Industrial plant, 1
Hospital, 1
United Veterans, 1

Ambulance association plan

In some communities, particularly in the State of Pennsylvania, ambulance associations have been set up by the volunteer fire departments. The purpose of these associations is to provide revenue from memberships for maintaining and operating the ambulance service.

The rules of these associations are quite similar; all require a certain fee for membership. This fee entitles the member to receive free ambulance





Left: Interior view of Superior-Cadillac ambulance. Right: Some of the equipment carried in the McMinnville, Ore., Fire Department ambulance. This department operates a Superior-Cadillac and a Superior-Pontiac

transportation up to, and in some cases, 100 miles from the community in which the fire station is located.

Typical of these groups is the Firemen's Ambulance Corps of Uniontown, Pa.

This unit has a membership fee of but $2.00, while some ambulance associations charge as much as $5.00 per year membership.

Rules of the Firemen's Amublance Corps of Uniontown, which are similar to many others, are as follows:

"Purpose: The purpose of this service is to provide transportation by ambulance for any of its members to or from any point within 50 miles from housing of ambulance. This service shall be provided without charge to the member.

"Service: Twenty-four-hour ambulance service shall be available to members. Each member shall be served as promptly as facilities and means of the Ambulance Corps permit.

"Service cards will be issued to those paying the membership fee indicated and the service will be available to the person to whom this card was issued as indicated. This card shall not be transferable.

"This service must be ordered by a physician.

"Membership: The membership fee for this service shall be $2.00 per year for family membership. This fee includes service to the wife, husband and children up to 18 years of age of the member. It also includes service to aged and infirm persons who are dependent upon adults supported by the member.

"Individual memberships shall be $1.00 per year.

"All persons living within the city of Uniontown, Pa., and North and South Union Townships are eligible for this service.

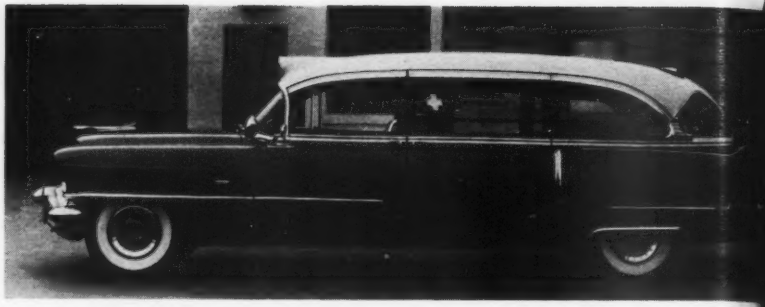
"The member of this service who moves outside these limits will no longer be entitled to service as defined in the mileage limits.

"A waiting period of ten days for local service and 30 days for out-of-town service will be required before service will be rendered under the service membership rules."

In most communities ambulance service is rendered to non-members but at a set fee plus mileage. Fees so received are in most instances sufficient to cover the cost of ambulance service and provide a sinking fund for replacement of wornout units.

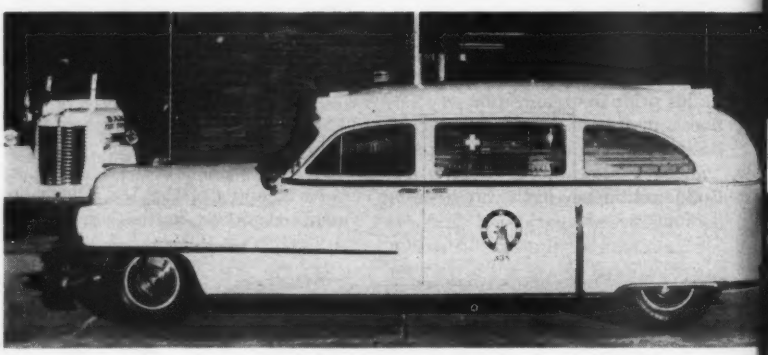
Scope of ambulance service

The work of the fire department ambulance crew parallels very closely that of the average hospital ambulance



One of the latest designs of fire service ambulances—a Superior-Cadillac

Packard-Henney ambulance of the Fallbrook, Cal., Fire Protection District, showing some of equipment carried



Local doctors train Baker, Ore., Fire Department Ambulance Crew in first aid. The unit shown above, a Superior-Cadillac, was donated by the local B. P. O. E. Lodge

Crew of the South Pasadena, Cal., Fire Department ambulance receives thorough first aid training, including even the care and handling of new-born babies. This is a Pontiac with Barnett body

The Chicago Fire Department operates thirteen Cadillac and Mercury ambulances, one of which is shown above

Coronado, Cal., Fire Department ambulance, a Cadillac

Lined up in front of the stately Governor's Palace, nationally known Williamsburg, Va., landmark, are the ambulances used by the Rescue Squad of the Williamsburg Fire Department

Some fire departments render ambulance service in a big way. Here's an array of modern units operated by the Baltimore, Md., Department

crew. In fact, some physicians have expressed the feeling that the fire department ambulance is more efficient, and better qualified than the average private hospital ambulance, where an intern does not travel with the unit. Work done by the fire department ambulance crew includes everything from childbirth to automobile crashes. The annals of the fire department ambulance service are filled with reports from physicians where patients have been kept alive until the doctor had arrived or untl the patient was transported to a hospital.

The city of Ferndale, Mich., is a typical example. There were 59 rescue calls during the course of the year for the fire department ambulance. Twenty of the victims had been pronounced dead before the fire department arrived. Of the 39 remaining, 37 were resuscitated and turned over to doctors or to hospitals on the way to recovery.

The fire department ambulance has one major advantage over the private or hospital ambulance. Members of the crew are qualified in rescue work, i.e., cave-ins, auto wrecks, train wrecks, etc.

Typical cases

The mayor of the city of Coronado, Calif., recently received a letter from a well known local physician in which he said:

"I should like very much to respectfully call to your attention the very prompt, fine and efficient service which is being rendered by the Fire Department and Firemen of Coronado in responding to ambulance calls.

"I am sure that I am expressing not only my own appreciation, but that of all the local doctors and the many people of Coronado who might otherwise not be alive today. I feel that the highest praise and commendation is due these fine men.

"Four recent cases stand out very clearly in my own personal experience. The first three cases were heart patients, all of whom were apparently lifeless when I arrived at their homes shortly after receiving urgent telephone calls. In each case I could detect no pulse, no heart beat, and breathing had ceased. After injecting a powerful stimulant, I immediately called the Fire Department. In an unbelievably short time the ambulance had arrived and the patient was receiving oxygen. As soon as safely possible the patients were transported in the ambulance to the Coronado Hospital where they eventually regained consciousness.

"The fourth case was not a heart patient, but a victim of severe acci-

dental injury. Upon receipt of an urgent telephone call I rushed to the patient's home—followed by a police car. I found a man who lives alone, lying in a pool of blood, bleeding from a jugular vein. After stopping the hemorrhage I called the ambulance. Within a few minutes the wounded man was in Coronado Hospital being repaired by a competent Coronado surgeon.

"All of these patients are alive today, thanks largely to the magnificent work of the men of the Ambulance Service.

"These incidents occurred on the following dates: July 15, 1952—2 P.M.; December 3, 1952—6:15 A.M.; December 20, 1952—6:25 A.M.; and January 16, 1953—3:50 A.M.

"We are indeed fortunate to have such an amazingly efficient and well trained organization as the Coronado Fire Department."

An unusual incident occurred at Antioch, Cal., where the fire department was called upon to extinguish a grass fire. A volunteer fireman was almost electrocuted by grasping the barbed wire fence, not knowing a garage truck had run into the electric pole about one-quarter of a mile down the road and charging the fence with 2,200 volts. Firemen used a pike pole, pulling him off the fence and gave him artificial respiration until he regained consciousness.

Another instance which showed the value of rescue work, as well as ambulance experience, also occurred at Antioch. Two men undertook the cleaning of a septic tank. They had uncovered the tank and one man started into the tank when he was overcome by sewer gas. He fell into the tank. The other man, trying to help him out, was also overcome. The wife of one of the men was watching and she called the fire department. Upon arrival, firemen pulled the men from the septic tank. Due to the use of the resuscitator on both men while taking them to Antioch Hospital, both recovered.

The Williamsburg, Va., fire department ambulance received widespread publicity as a result of a wild dash to Richmond with premature twin babies. The ambulance was credited with saving their lives by rigging a makeshift oxygen tent to keep them breathing until placed in incubators.

On another occasion the unit worked six hours one evening to rescue a man trapped at the bottom of a 40-foot well. He became mired in the sticky clay with water continually rising over him. The ambulance squad had to keep removing water, supplying oxygen and digging him out in a space only 36 inches in diameter.

The unit was cited in November, 1955, for the job they did in extricating from her car a William and Mary coed who was pinned beneath it after it went off a highway into a 35-foot ravine. Although she suffered seven fractured vertebrae, fractures of both arms and shoulder and a number of severe lacerations, the crew was successful in immobilizing all fractures and saving her life. They administered oxygen to her throughout the 40 minutes it took to get her out. Another automobile accident brought the crew face to face with a woman who, among other injuries, had her left leg torn off at the knee. Quick application of a tourniquet and compresses, and administration of oxygen, plus a hurry-up trip to the nearest hospital, saved her life.

Heroic work not appreciated

On August 16, 1952, the Woodland Beach Volunteer Fire Department of Edgewater, Md., received a drowning alarm at Pine Whiff Beach, about two miles from their quarters. The ambulance responded promptly, and found a woman about 57 years of age lying on the beach, unattended, and covered only by a thin smock. She had gotten into trouble in the water, been dragged out by some men on the beach, and left where the ambulance crew found her.

The subject was unconscious, with no discernible pulse in wrist or neck, nor discernible respiration. Her finger nails and toe nails, ears and lips were blue. Body temperature was very low and flesh flaccid to point of hanging downward. Less than a minute after arrival, the subject's bowels evacuated. There was no sign of life and she looked like a certain D. O. A.

The weather was chilly and heavily overcast.

The crew went to work promptly. One man covered her with blankets, another man readied the resuscitator while a third checked mouth and throat for possible stoppage matter. Spectators were sent for hot water and bottles.

The resuscitator was applied at fast position. Female bystanders were enlisted to cut and remove wet bathing suit without exposing subject to conserve body heat. Resuscitator signaled stoppage The victim's head was rotated and head and neck adjusted and clearance through air passages obtained for resuscitation. Heat had been applied on arrival. The crew worked from 10 to 15 minutes with no response. Keeping the subject well covered, they jack-knifed legs and massaged body in an effort to promote circulation.

Time under these conditions is hard to measure, but after from a half-hour to an hour, the victim responded to the efforts of the ambulance crew and the resuscitator was switched from resuscitation to inhalation, while the men continued to massage her body. As color returned to her face, she was carried to the ambulance and transported to the hospital in Annapolis. The woman recovered consciousness before the crew had left the hospital and on discovering she was nude, bawled them out for removing her bathing suit. She fully recovered.

This case points up the fact that rescue efforts should be applied and continued for a couple of hours regardless of how hopeless the case may appear.

Does it really benefit the fire service?

Convincing proof of the value of ambulance service operated by the fire service is given in the following comments from fire chiefs:

"Our ambulance has done more for the fire department in the way of public relations than any other thing I know of."—*Chief D. J. Lavanbarg, South Pasadena, Cal.*

"The best public relations program any fire department can have."—*Chief W. B. Salyers, Covington, Ky.*

"Enables chief in securing appropriations for new apparatus and equipment especially for emergency work."

"The majority of commendations received by this department are the result of rendering ambulance service."—*V. C. Bailey, Director of Public Safety, Grosse Pointe Woods, Mich.*

"It creates a lot of good will on the part of the public and is an absolute 'must' for our community."—*Chief James Cockriel, St. Paul Park, Minn.*

"This has been one of the best public relations projects of the entire department, and has brought more praise than any other function." — *Captain Roy Hardy, Rescue Squad, Greenville, N. C.*

"It is the best public relations activity that any department can engage in." —*Chief M. L. Warner, Fairborn, Ohio.*

"Provides very favorable public relations activity. We have never been turned down by our public on any request."—*Chief I. L. Pearson, McMinnville, Ore.*

Fire department ambulance service has proved itself. It has also become a tremendous asset in advancing the fire service in the eyes of the public and winning friends among those who are in a position to make funds available for new apparatus, equipment and other fire department purposes.

The Editor extends his appreciation to the many who contributed to this survey and extends his apologies for any reports which have been omitted because of tardy receipt. □□

Firemen from L. A. City Fire Department on top of overturned car of Santa Fe train. Ladders used on exterior to get on top of train and then other ladders used to get into interior
—*L.A.F.D. Photo by Kalp*

Versatility of Fire Rescue Forces Shown by

Train Wreck and Flood

By CLIFF DEKTAR

MAJOR DISASTER struck twice within five days in Los Angeles County, Calif., and, as usual, fire services in areas involved played important roles in rescue work.

First and most costly in human lives was the tragic wreck of a San Diego-bound Sante Fe two-car diesel train at 5:42 p.m. on Sunday, January 22.

The wreck occurred as the train was highballing at 65-70 miles-per-hour—nearly double the maximum speed allowed—through the Sante Fe yards in the neighborhood of Washington Blvd. and Santa Fe Ave., near the Los Angeles industrial district.

The two cars left the rails on a curve at Redondo Junction, overturning and spilling passengers through windows of the aluminum coaches.

Thirty persons died, many of them horribly mangled as the cars dragged along 200 feet of track on their sides. More than 150 persons were injured, the toll being the greatest in any train accident in the history of Los Angeles County.

For some reason, as yet unexplained by Los Angeles Police Department authorities who were severely criticized by local newspapers for their handling of the wreck, no call was made to the Los Angeles City Fire Department until 6:02 p.m., despite the fact that heavy diesel oil was spilled over the yards and heavy rescue equipment was desperately needed.

L.A.F.D., not knowing the extent of the wreck, immediately dispatched Batt. Chief F. J. Newjahr, Battalion 7. At 6:11 he ordered Engine 17, Truck 17, Utility 3, Squad 23, and Emergency 10 to the scene. The utility truck carries lighting equipment, the squad cutting equipment and extra manpower, and the emergency truck heavy rescue equipment including saws and torches.

The engine company immediately laid lines in event the oil should be touched off by any of the hundreds of rescue workers and spectators jamming the railroad yards, and truckmen unlimbered ladders and axes and began the heart-breaking work of cutting into the coaches to see if any living remained inside.

A few minutes later, at 6:22 p.m., additional request for special equipment was received and Truck 30, Utility 27, and Emergency 27—the latter two rigs from Hollywood Division Headquarters—responded. Also arriving were Asst. Chief Ronald T. Robertson, Division III, and Deputy Chief Frank Winkler, who took command of the fire department's role in the rescue.

Firemen used their equipment to check the interiors of the coaches, ladders being raised outside the coaches and then additional ladders being lowered from the top into the interiors.

Most of the cutting work was done by railroad workers.

All available ambulances in the county were summoned and rushed the injured to a half dozen hospitals, while deputy coroners arrived and began the messy job of picking up the remains of the mangled dead.

The following Thursday, January 26, the Los Angeles area was deluged with better than 7 inches of rain in a fast-moving storm. Very few areas of the county, including Downtown Los Angeles, escaped flooding, but the southern part of the county was particularly hard hit. For a time it was impossible to get into the southern districts by automobile because of high water on every street.

Torrance was particularly hard hit and Torrance firemen aided police, volunteers, and National Guard troops in rescue efforts.

Firemen in many other cities also turned out to assist in rescue efforts.

Since much of the uninicorporated area was hard hit, Los Angeles County Fire Chief Keith E. Klinger ordered his men into the field to assist deputy sheriffs and others in rescue attempts.

A pool of equipment and men was established at the Cecil R. Gehr Fire Training Center for dispatch to needy areas. Several freight trucks were loaned to the Red Cross.

Battalion Chief Noel Manchester, Battalion 1, and men from Rescue Companies 8 and 18 and Engine 58 participated in an unusual rescue in the Culver City district.

Fumes overcome truck crew

Three men in an oil tanker stalled in floodwaters were overcome by fumes. Witnesses in a nearby trailer park spotted the men in trouble and managed to carry them into the park office, but it was immediately evident that they needed prompt attention.

County firemen were called and Chief Manchester and Rescue 18 rolled in from the east. Blocked by fields of water through which the truck could not travel, Firemen John Connolley and James Woodard hoisted the resuscitator over their heads and, with Chief Manchester assisting, waded a quarter mile through water sometimes up to their waist. They reached the scene and started work on the victims.

Finally Engine 58, under Capt. Harold Davis, worked its way in from the north side, followed by Rescue 8. Since ambulances to take the victims to hospitals also could not enter, the victims were strapped to the top of Engine 58 and driven to safety.

Meanwhile, in other areas, engine companies assisted in evacuations. In the Baldwin Park District, Engine 29 picked up nearly a dozen stranded persons. □□

OVERHAUL AND SALVAGE . . . IN THEORY AND PRACTICE

By
ROI B. WOOLLEY

Dewatering can be a problem as in this chemical fire. Not all this water passed through the chemical warehouse during fire extinguishing operations but enough did—and picked up chemicals en route to produce the effect shown. Water damage in this blaze was reported greater than actual fire losses. Salvagemen working inside took considerable punishment from water—hot, cold and chemical-laden

PART XI

Removing Water From Buildings

INASMUCH AS WATER causes more damage than the fire itself in most fire control and extinguishing operations of any magnitude, the problems of preventing the extension of water into and involvement of perishable materials, and speeding the removal of water from building and contents are paramount.

The majority of salvage operations hinge upon these factors. For the purpose of this study we will refer to this procedure as dewatering.

The methods and techniques of dewatering as related to salvage, whether the property is involved in fire, flood, or for some other reason, will be reviewed in detail in subsequent chapters. At this time it is in order to discuss certain general fundamentals leading up to the actual dewatering operations themselves. Emphasis is placed on removing water *below the fire*, but not from basement or cellar. This phase will be covered later.

Physical Aspects and Size-up

Throughout this series we have repeatedly referred to the importance of size-up in planning and executing salvage operations.

It is essential in mapping out dewatering operations that certain physical aspects of building and occupancy —and exposures—be known. Pre-fire knowledge of the occupancy in question, as previously recommended, will greatly facilitate dewatering and other salvage operations during and after the fire, once it occurs.

These physical aspects involve

a. The building itself: construction, combustibility, etc.
b. The type of occupancy: susceptibility to damage by fire, water, smoke
c. The location of the building: with relation to approaches, exposures, etc.
d. The location of the fire: with respect to heighth and location in the building, involvement, exposures, etc.
e. The position of the fire with respect to the floors, floor area and other details that might be involved in dewatering.

It is common knowledge that water seeks its level. It will find the tiniest openings to reach that level. It will penetrate and filter through what may appear to be the most impenetrable material, given the time. It will spread on some surfaces with almost unbelievable rapidity, particularly where there is a grade and it is on non-absorbable material.

Two factors to be noted in connection with ridding a building of water are: (1) the area and porosity of floors; and (2) area and type of ceilings present. Water can collect and spread out over wide areas in some ceilings as well as on floors. Worse still, the accumulation of water in ceiling spaces (the water may be scalding hot) constitutes a hazard not only to the materials and stocks below, but to those engaged in salvage and overhaul operations.

At the same time, size-up should pay particular attention to the occupancy itself, the kind and quantity of contents and a quick estimate of the risks involved should be made. Most experienced salvagemen can quickly estimate the value of such contents.

At the Top, But Below the Fire

Salvage operations, and we include dewatering, usually begin on the fire floor if possible and, if not, on the floor or floors below the fire—except of

Sometimes floors can be opened up to drain into catch-alls or dams on floors below which, in turn, chute or funnel the water out of the occupancy. Such was the case in this Chicago building where water is being collected in a catch-all contrived of salvage covers to be chuted outside, from the floor below —*Photo courtesy Chicago Fire Insurance Patrol*

course where the fire is on the ground floor or below ground level. In any case, operations should begin as quickly as possible.

Basically, these operations have two major objectives: (1) to protect the contents against the encroachment of water and (2) to contain and discharge the water insofar as possible outside the premises, so as to prevent further involvement and damage.

Salvage is performed below the fire floor by spreading and bagging covers. The severity of the fire and the extinguishing methods employed by the fire department will give some indication of the water problem to be faced, and the dewatering measures to be taken to cope with it.

Containing the water on the floor below the fire may be difficult, depending upon the area of involvement, the availability of salvagemen and equipment, and the conditions (heat and smoke) under which men have to work.

It may be necessary to cut holes through flooring at the heaviest concentrations of water and to drain the discharge into chutes or funnels, thence out of doors, or down shafts. If the water can be bagged or dammed, it may be removed by mechanical means, such as shallow draft electric pumps, etc. Modern practice still relies heavily upon good old sawdust to dam and/or divert water to the point of discharge where its exit will do the least harm.

The type of floor (construction and finish) may give an idea of the speed with which water may penetrate it and reach areas below. So too, will the number and kind of floor openings, pipe recesses, electrical fixtures and so on. Stairways and fire towers may become natural waterways when the water volume permits their use. Of course, where they are used, every effort should be made to block off doors and other openings so that the water will follow the most natural line of least resistance to its final exit.

Where possible, the ideal practice is to chute or otherwise divert the water out of the building via windows or other openings as nearly below the fire as possible, rather than to attempt to divert it down elevator shafts. Logically, the less water that is allowed to accumulate in the basement or on ground floor levels, the less post-fire dewatering will have to be done. As we shall see in the discussion of dewatering basements (in a later Chapter), every effort should be made to prevent water from entering basements either from the interior of the building or its exterior. Sometimes basement windows are recessed and water chuted or otherwise discharged from above into the open air, may find its way back into the structure.

Start Water Removal Immediately

Prompt action is essential in all salvage operations—particularly so in dewatering. Water removal should begin as quickly as possible. We have said that chutes or funnels should be used to divert heavy concentrations of water. There are plenty of small portable pumps and siphons that may be used to draft water from containers (the practice of scooping or shoveling out shallow water from bagged covers or other containers is being discontinued). Water so picked up can be discharged out of windows or into sinks or toilet bowls.

Attention should be given the ceiling below the fire floor because this is most likely to accumulate quantities of water and to possibly collapse on the heads of salvagemen or fire fighters. It may be advisable to puncture the ceiling to prevent collapse, and to drain off its contents into selected channels. Pendant light fixtures may be a path of discharge to floors below and should be checked.

It takes time and effort to set the stage for efficient below-fire salvage and dewatering at "working fires", even with full crews of trained men. The longer the delay in getting to work, the more complicated and difficult the dewatering operation. A factor in speed, or the lack of it, is equip-

Continued on page 230

Every minute water remained on the floors of this high value occupancy, the New York *News*, it threatened to damage costly equipment and delay publication. New York Fire Patrolmen, using every known salvage device, and some they extemporized for the situation, worked water off floors, out of recesses and pits in one of the outstanding salvage operations of the day

A million-dollar loss resulted when fire swept this freight house in Chicago at the end of the year

Multiple Alarm Fires Feature Chicago Holiday Season

There was no rest for Chicago fire fighters over the year-end holidays, as three fires, spurred by high winds, virtually destroyed a freight terminal, an historic church and a lumber storage shed. Property damage was estimated at close to $2 million.

The largest single loss, according to Chief Fire Marshal Albert H. Peterson, occurred at the Wabash Railroad and Acme Freight Terminal, a 750-foot long two-story brick structure at 27-29 W. Roosevelt road. This blaze did damage estimated at $1 million, destroying much of the building, eight loaded freight cars and damaging some 20 trailer vans.

Fire gains headway

The fire which was discovered after Christmas Day loading had stopped, started in the ceiling of the first floor of the vast structure and had great headway before firemen had a line on it. The night watchman burned both hands in the effort to close a corrugated steel door to shut off the office from the warehouse section.

Firemen, responding on 5-11 alarms, utilized some 50 pieces of apparatus. Five fire fighters were injured in this operation, none seriously. The fire was fought from both levels of Roosevelt road; some crews operated lines on the roaring, smoky blaze from the tops of 30 freight cars located around the building. Some of the railroad tracks entering the Dearborn street station were blocked temporarily.

The cause of this near-conflagration was not ascertained.

Only a few hours before this dangerous blaze, early on December 26, another 5-11 fire swept through St. Paul's Evangelical and Reformed Church at Fullerton and Orchard streets, causing an estimated $500,000 loss. Three fire fighters were injured in this fire, none seriously.

This spectacular early morning blaze roared through the historic, picturesque stone edifice amid a ringing

Fire in St. Paul's weakens support of steeple

Changing a hose layout during Wabash Freight Terminal fire

of its chimes set off by the roaring fire.

Steeple falls

Flames engulfed the 35-foot wood steeple that surmounted the 70-foot high structure and toppled it, some of the burning debris landing on the roof of St. Paul's new three-story chapel.

Exposures Covered Effectively

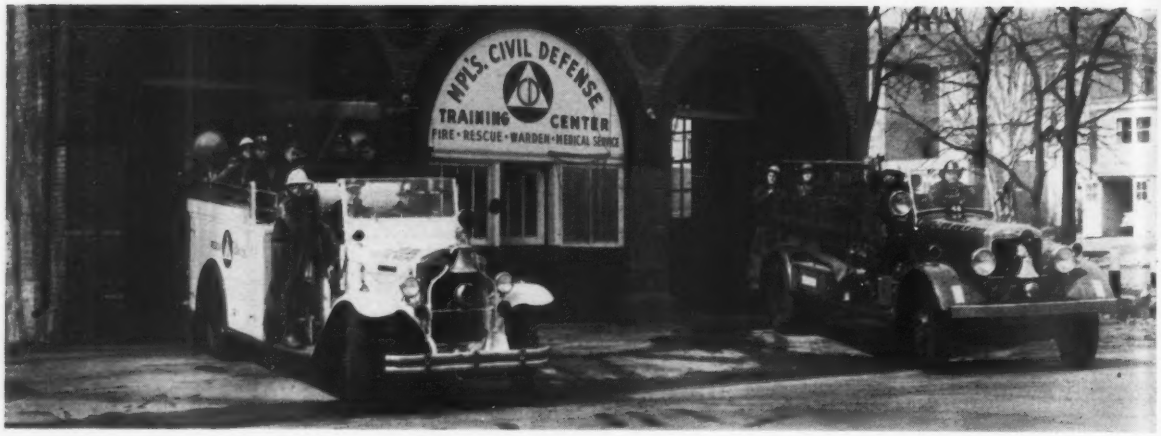
Fire fighters, aided in this case by a favorable north wind, kept the fire from spreading to the nearby seven-story Children's Memorial Hospital. Besides the heavy duty streams played on the church itself, firemen wet down roofs of houses along Orchard street as well as that of the new chapel. Nurses and interns meanwhile calmed the patients in the hospital and transferred some 40 children from their rooms on the Orchard street side to other quarters.

The blaze was the third suffered by the church since its founding in 1843. Its organ had only just been rebuilt at a cost of $50,000 and was played for the first time at the Christmas Eve services.

The third fire occurred on Christmas Day and involved a storage shed in the Sterling Lumber & Supply Yards on Halstead street. This blaze damaged property to the extent of $75,000, according to Chief Peterson. One fireman was slightly injured in the 3-11 alarm struggle. □□

Steeple starts its journey to the street below

St. Paul's Church fully involved by fire



Reactivated fire station serves as headquarters for Minneapolis fire and rescue training, as well as for the warden service and emergency medical services

Minneapolis Has Unique CD Fire and Rescue Program

FIVE YEARS AGO when Minneapolis Civil Defense director Walter P. Halstead asked Fire Chief Reynold C. Malmquist to set up a volunteer fire and rescue reserve training program, he had no idea that it would develop eventually into one of the most efficient and effective such programs in the United States.

By R. F. HUBBARD

Public Information Officer
Minneapolis Office of Civil Defense

In addition to training more than 600 men, the Minneapolis program came up with two "firsts":

1. First city to have its own Civil Defense fire station.
2. First—and perhaps only—city to develop a concentrated, one-day 8-hour fire and rescue training class for industry.

Known as the Minneapolis Civil Defense training center, the fire station serves a triple function, being not only fire and rescue headquarters, but also head office for the warden serv-

Left: Captain R. T. Palmer, M. F. D., supervises the making of connections at a C. D. training incident **Right:** C. D. Team performs rescue evolutions

ice and emergency medical services. It is in use five nights a week and on Saturdays and Sundays.

Closed down by the city in 1947 as a regular fire station, Civil Defense secured permission to reactivate it in 1953. It was in an extremely run-down condition and an eyesore in an attractive residential district. Its only function was to serve as storage space for voting booths.

After Civil Defense took it over, the station again became a credit to the neighborhood, being kept clean and with neat grounds. Gas heating was installed. Fire and Rescue volunteers replaced broken windows, moved all voting booths into the basement until storage space could be arranged elsewhere, completely cleaned the 2-story building inside and out, repainted the kitchen and shower room and installed new locks on all the doors. Two bachelor drivers moved in a year later to serve as volunteer station keepers, thus keeping it active 24 hours a day.

Civil Defense equipment includes five trucks:

Ward LaFrance quadruple;
Diamond T salvage;
Diamond T rescue;
Reo CD rescue, fully equipped;
Reo CD rescue, on loan from state CD.

Other equipment includes three complete rescue sets, 65 rubber coats, regular fire-fighting equipment.

To date, more than 600 men have taken the basic 32-hour training course—held in 16 weekly, 2-hour sessions—which has been developed for both fire and rescue.

Comprehensive training program

The fire training course includes use of films and demonstrations, with each volunteer taking an active part in exercises, of fire extinguishers, forcible entry tools, gas masks, fire ladders, ropes and hose. Several simulated "incidents" are held each year, with all men taking part in putting out live fires set in condemned buildings and city dumps.

Rescue training also uses films and demonstrations, and takes up the care and use of ropes and basic knots; stretcher blanketing, lashing and handling; inventory of rescue truck; care and use of ladders, carrying and raising ladders, ladder rescues; use of block and tackle; casualty rescues and immediate first aid.

All training is carried out under the supervision of a MFD fire captain assigned to Civil Defense full-time. Present training coordinator is Captain John Howard, who succeeded Captain (now Deputy Chief in charge of Fire Prevention) Robert T. Palmer. In the early days of the program, before Chief Palmer was assigned full-time two years ago, training was under the direction of Palmer and Deputy Chiefs Arthur Spottswood, Edward Rylander and Rudy Anderson.

Value of a Civil Defense fire and rescue reserve has been demonstrated many times. Most notable example came last May when a $819,000 fire in a downtown business block, accompanied by a 42-mile-an-hour wind, threatened to wipe out a whole section just south of the Mississippi river. Sixty Civil Defense fire and rescue volunteers responded to the alarm, clad in regular business clothes, and helped to man hose on buildings and confine the damage to one building destroyed and three damaged.

More than 200 men and five women have been through the unique one-day, 8-hour industrial rescue and fire training course. This program was developed to give business firms and industrial plants an opportunity to put their own internal Civil Defense volunteers through concentrated fire and rescue training.

It has been found that the concentrated course makes it possible to give more effective Civil Defense indoctrination and promotes greater individual assimilation of the subject material, as apposed to a scattered series of 2-hour classes. It also has been found that greater enthusiasm for Civil Defense is developed when individuals find that they are part of a group working toward a mutual end of preparedness.

Classes begin at 8 a.m. and end at 4:30 p.m., with morning and afternoon coffee breaks and luncheon. The sponsoring firm pays for the coffee and lunch expense, as well as the day's salaries for the volunteers. The course has been sponsored by the First National Bank, the Northern States Power Company, the Northwestern National Bank, the U. S. Post Office and the Deere & Webber Company.

The most extensive training exercise conducted to date has been Exercise Neighbor, held a year ago. The purpose was to determine how effective cooperation could be from the 14 surrounding communities making up the Minneapolis Metropolitan Mutual Aid Area in case of an emergency. More than 200 volunteers and 35 rigs took part in the exercise, which had six different fire and rescue incidents at various points in the city.

National recognition to the Minneapolis Civil Defense fire and rescue reserve training program was given last April when Chief Palmer was chosen to head a rescue exercise team in "Operation Cue," the Federal Civil Defense atomic test in Las Vegas.

The contribution of the Minneapolis Fire Department toward development of the Civil Defense program has not been confined to fire and rescue only. Edwin L. Heath, superintendent of communications, is chairman of the air raid warning devices committee, and has carried most of the responsibility for selecting air raid sirens sites and supervising the installation of the 30 sirens which are now in operation in Minneapolis. Not the least of Heath's job was to test various types of sirens under varying conditions and then make a recommendation for purchase. Fifteen of the sirens now installed are 10 h.p. rotating-directional units with an effective penetrating radius of ¾-⅞ mile. The other fifteen are a non-directional 2 h.p. type.

All in all, as CD director Halstead points out, "Too much credit cannot be given to Chief Malmquist and the members of the Minneapolis Fire Department who have worked so hard and so ably to give Minneapolis an outstanding first and rescue reserve."

Freak Flood, Fire Cause Heavy Loss to Ford Plant

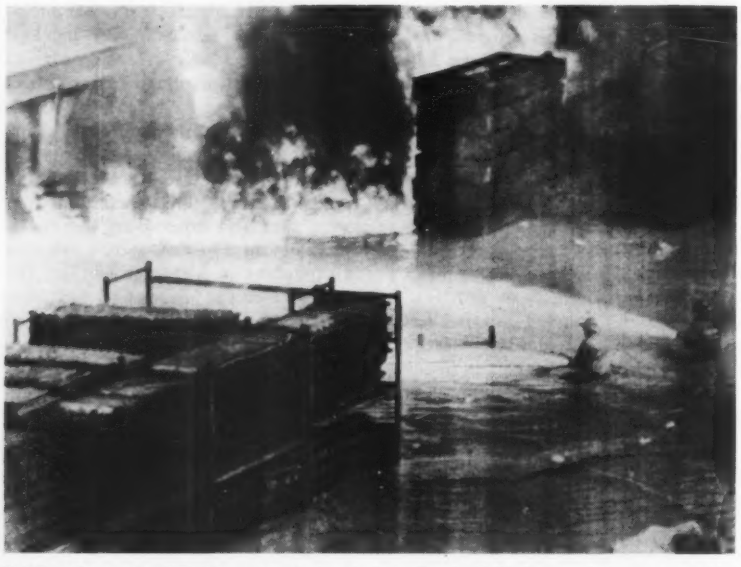
By PAUL C. DITZEL

Damage estimated by Ford Motor Company officials at as high as $10,000,000 was caused January 26, 1956, when flood waters bearing volatile agents ignited and touched off a severe fire at the Long Beach, Calif., assembly plant.

The freakish chain of events which led up to the unique fire started at 8 a.m., when flood waters from heavy rains and a high tide of six feet nine inches at Terminal Island flowed over a levee a mile away from the Ford plant.

The waters carried a flammable coating on the surface when they swept over dozens of active oil wells and sumps adjacent to the plant. Two

Waist-deep in oil-slick-covered flood water, firemen of Long Beach, Calif., Department battle fire in Ford Assembly Plant. Note fireboat stream at right being used to break up concentration of flammable slick on surface of water



Fighting fire under difficulties at Ford plant in Long Beach, Calif. Streams being used to drive back flames on surface of flood water

hours after the break-through, while firemen were posting "No Smoking" signs, the oil-mixed waters together with gas, believed to have been leaking from underground gasoline and paint thinner storage tanks at Ford, contacted a transformer. The short-circuited transformer provided the spark for one of the most unique fires in the history of the Los Angeles and Long Beach Fire Departments.

Firemen from 15 Long Beach and Los Angeles companies, together with fireboats battled the flames. Land firemen were waist-deep in flood waters. Flames communicated to six storage bins of parts and a fuel storage building outside the main plant of Ford. The area involved was estimated at 100 by 300 feet.

R. C. Armour, plant manager, estimated that about 35 per cent, or parts valued at $3,000,000 were damaged by fire or water. Additional damage to the plant and machinery might push the final damage figure up to $10,000,000.

The plant, one of 16 Ford assembly plants in the United States, is located in the subsidence area of Long Beach and was protected by the dike. Land in the area has dropped 16 feet in the past 25 years and this subsidence is believed due to the removal of oil from underground pools, according to petroleum engineers and scientists.

The water overran the levees to a depth of from 2 to 4 feet in the main plant. Because of the heavy rains and the flood, work had been canceled for 1800 plant employees. Only supervisory personnel and firemen were in the area. The plant was built in 1930 and assembles more than 50,000 automobiles annually for sale in eight western states. □□

Value of Fire Drills Demonstrated When an

Orphanage Goes Up in Smoke

By PAUL C. DITZEL

COURAGEOUS and quick work by nuns when a fast-spreading fire January 7, ripped through the German Roman Catholic Orphan Home in Buffalo, N. Y., coupled with the daytime outbreak of the blaze, prevented almost certain loss of life among the home's 105 children.

The four-alarm fire, Buffalo's first in nearly six years, caused an estimated $800,000 damage to the sprawling 3½-story home at 564 Dodge Street.

Commissioner William M. Daly, who personally led firemen, ordered heavy duty turret nozzle equipment into play to stop the spread of the flames.

Thanks to frequently rehearsed fire drills in the built-to-burn structure, first alarm companies found the orphanage's 24 nuns leading single file chains of children from the smoke-filled building.

Investigators believe the flames started in a small pharmacy storage closet under stairs at the second-floor level of the antiquated building.

"I was coming from the third floor of the building," said Sister Clare, home supervisor, "when I saw the fire

in the middle of the second floor. The corridors quickly filled with smoke. I went downstairs and put in an alarm to which the other sisters and children responded immediately. Quick action by the sisters and discipline among the children helped get everyone out safely."

Discipline drill pays dividends

Sister Clare's action set off the fire alarm bell and transmitted the call to the Buffalo Fire Alarm Office. The first alarm at 9:52 a.m. was followed by the second at 9:55, the third at 9:58 and the fourth, ordered by Commissioner Daly, at 10:19.

Sister Clare suffered cuts around the left eye when she ran into a statue of St. Francis while she was searching the smoke-charged hallways for children. The orphans, however, emptied the orphanage in regulation fire drill order in several minutes.

Flames roared up the central tower of the orphanage and shot above the cross on top. A blast later ripped off part of the roof. The flames spread outward from the central building, but were turned back before they could cause extensive damage to the east and west wings. The interior of the administration building was burned out and most of the roof collapsed. Water damage was heavy throughout the structure.

What could have been a major problem of rescue for firemen turned out to be a comparatively minor one. Only seven residents of the home had to be carried down ladders or led down fire escapes by firemen.

One of those rescued was a 79-year-old seamstress, Mary Larocca, subject of a desperate search by Sister Clare. Firemen found the elderly woman standing near a window of her third floor room and Fireman James McCarthy of Hook and Ladder 11 brought her down a ladder.

The children, ranging in age from 3½ to 16, were in the play halls and dormitories of the first and second floors when the fire started. They assembled quickly and most of them took their hats and coats with them when they marched outside into frigid 19-degree temperatures and across the yard to a school.

Fire Commissioner Daly, who made the damage estimate, broke it down into $500,000 to the building and $300,000 to the contents. Four of his firemen suffered minor injuries while battling the flames. They included Chief Barry Piggott of the Third Battalion, Capt. Franklyn Dahlke, Firemen Fred Houchhauser and Otto Zelin, all of Hook and Ladder 6, and Fireman Frank Laufer of Engine 33.

The burned out interior of the central building housed the dining room, kitchen, four vacant dormitories, guest rooms, the chaplain's office, pharmacy, and library where valuable books were lost.

The two wings of the building housing the girls' and boys' dormitories were protected by fire walls installed only last year.

The investigation into the four-alarm fire was made by Battalion Chief Leo S. Considine of the Fire Prevention Bureau, Detective Sergeant Fred Thomasula of the Police Department Arson Squad, Daniel J. McGirr, B.F.D. arson investigator; Assistant Fire Prevention Chief G. C. Uhrich, Detectives Stanley Segit and Robert Ritchie, also of the police arson squad; John J. Quinlan, deputy commissioner of public works; William J. Weyland, buildings division inspector and John W. Pennisten of the National Board of Fire Underwriters.

They concluded that the fire started in the pharmacy closet, after spending the following morning going over the ruins. But Chief Considine said the cause "is still undetermined." Sergeant Thomasula added, "This fire was certainly an accident. There is no possibility it was set."

The storage closet doors were burned away and the interior was a jumbled mass of broken bottles and sagging shelves.

Orren J. Lovegrove, Jr., the home's chief engineer, told the investigators he was in the pharmacy about five minutes before the fire began and "there was no sign of anything wrong on the floor." A few minutes later the phone in his office rang and Sister Clare was reporting the fire. Lovegrove fought the fire with a hand extinguisher until it ran empty.

Firemen were recalled to the scene on a rekindle at 3 o'clock the following morning.

A sidelight on the fire was the Very Rev. Msgr. Raymond F. Herzing's experience. He believed the ringing fire alarm in the corridors outside his study was a routine drill. He remained therein, despite the fact flames were eating at the wall of his office, until a nun burst in to tell him the orphanage was ablaze.

The Most Rev. Joseph A. Burke, bishop of the Catholic Diocese of Buffalo, expressed his deep gratitude for the work of the Buffalo Fire and Police Department and praised the "matchless control and leadership of the sisters in guiding the children out of the home."

Assisted by auxiliary firemen

Buffalo firemen were assisted at the fire by about 60 auxiliary firemen led by their chief, David E. Peugeot, Chief Peugeot said his men were used to relieve firemen on hose lines and in helping to lay lines. Four auxiliary pumpers went into service: one at the scene and three others on stand-by basis at stations emptied of equipment by the four alarms.

The response of Buffalo civic and governmental groups was the most heartening phase of the entire affair. Help for the orphans came from organizations throughout Western New York while the children were moved to temporary new quarters in the Immaculate Heart of Mary Children's Home in suburban Cheektowaga. The Salvation Army mobile canteen was on hand with coffee and doughnuts

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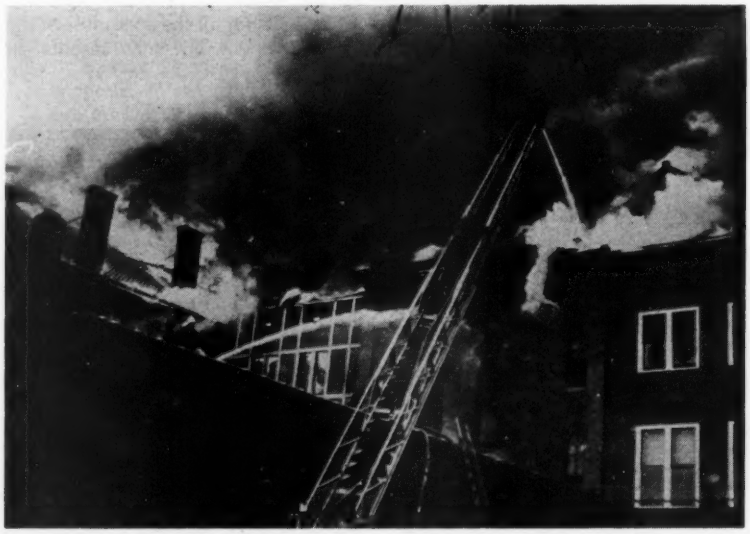


Buffalo firemen fight orphanage fire from every vantage point

Seat Belts May Prove a Solution to the Problem of

Reducing Fire Department Injuries

NO ONE KNOWS just how many fire fighters have been killed by being thrown from their apparatus or other fire vehicles. Reference to the pages of FIRE ENGINEERING dating as far back as the first horse-drawn vehicles discloses that men were being killed or injured by the overturning of vehicles, or as a result of collisions which threw the men from the rigs.

In this connection it is interesting to note that efforts were made back in the early days of horse-drawn apparatus to safeguard drivers by providing them safety belts. Many municipal fire departments made the use of leather belts (the webbed belt was not yet developed) mandatory for all drivers of heavy rigs. But we find no mention of belts for the hapless tillerman. Incidentally, those early seat belts were intended to guard against the pull of the galloping horses, rather than as protection to drivers in the event of collision.

With the coming of the motor-driven fire vehicle, the idea of protecting chauffeurs against accident incidental to collision or breakdown was generally forgotten. The advent of the enclosed or semi-enclosed apparatus, many believed, provided sufficient protection for drivers and on-side riders so that belts or other similar safety devices for the crews were unnecessary.

The casualty records, however, continued to chalk up injuries and fatalities among fire fighters, as a result of accidental smashup, notwithstanding the measure of protection afforded by the enclosed vehicle. And many of these casualties resulted from men either being thrown out of the cabs or being thrown against the windshield or interior of the cab itself following impact resulting from the smashup of their apparatus.

This failure to adopt suitable safety gear for heavy vehicles has not been peculiar to the fire service alone. The entire trucking industry either ignored the handwriting on the casualty reports, or for some other reasons shied away from safety belts. This practice continued until some of the more safety-conscious fleets, taking a cue from the air service no doubt, set about experimenting with belts.

Today, safety belts are finding their way into fleet-owned trucking operations just as they are for sales and service cars in some industrial companies.

Safety belts used in East

FIRE ENGINEERING was the first to bring the fire service the news that safety belts were being experimented with by municipal fire departments. The editors believe it was Chicago, Ill., which first actually tried them out.

Since that time a number of scattered fire departments have installed the device with what are reported highly satisfactory results.

One of these is the Hackensack, N. J., Fire Department, which has installed seat belts in all of its fire vehicles. The belts are somewhat similar to those originating with the airlines and now being adopted by automobile users.

Application of the safety belt to fire department vehicles, and to those who ride in or on them, may be said to have two objectives: (a) to prevent the wearer from being thrown from the vehicle and (b) to prevent the wearer from being thrown against a part of the vehicle or its equipment.

Until detailed casualty studies have been made within the fire service to relate various casualties to types of vehicles and kinds of collisions, it is difficult to attempt to determine the relative importance of such safety devices to occupants of the driver's seat (usually officer and driver) or those riding the rig, i.e., on side or rear running board and in the tiller seat.

When and if casualty statistics are available to relate types and kinds of fire department vehicles to kinds of collision and resulting injuries to those riding the vehicles, the relative importance of safety belts or other restraining gear may be definitized. Even at present, there is evidence to support the contention of New York's Fire Commissioner Edward F. Cavanagh, Jr., that "the use of safety belts for firemen . . . is the most comprehensive safety step ever taken by the department."

Commissioner Cavanagh has backed up his belief by ordering personnel safety belts for all the apparatus of the fire department. The initial installation

Left: New York City installs first safety belt on its fire apparatus. Acting Chief Edward Connors (left) and Commissioner Edward Cavanagh (right) inspect operation of device on Fireman John Mason **Right:** Seat belts in use on Hackensack, N. J., fire rigs

Tillerman on Chicago aerial truck equipped with quick-release seat belt

was made February 2, with Ladder 12, 243 West 20 street, Manhattan, the recipient.

More than 1,500 of the safety belts will be required for this department. There are presently 701 vehicles in the organization. Among them are 340 pumpers, 154 ladder trucks and 30 hose wagons.

The mechanics of safety

Studies of the amount of force the human body can tolerate in impact, and the protective measures that can best be used to insure survival to the limit of tolerance have been made by various authorities.

Although the evidence gathered varies in some degree, it is established by tests conducted by and for the Air Force that a properly shock-mounted human body seated in the forward facing position can sustain four tons of force applied within one quarter of a second and suffer no disability.

It is said an average force of 8,000 pounds would be exerted on the body of a 157 pound man during deceleration from 60 miles an hour to a stop in less than three feet. It is a force of 46 times his body weight. This is 92 times the force experienced while skidding all four wheels of a car on dry pavement in going from a speed of 30 miles per hour to 10 miles per hour.

Air Force tests made by automotive authorities prove that the forces encountered in the large majority of automobile crashes are survivable without serious injury "if the occupant distributed the force over the strong solid quarters of the body by means of webbing straps and is not struck by solid objects."

According to Lt. Col. John P. Stapp, Chief of Aero Medical Field Laboratory, "people keep saying that speed kills. It isn't speed. It's change of speed that can kill you. Going from 60 miles an hour to a stop in about three feet is nothing particularly hazardous if you are properly fastened in, but can be fatal if you aren't."

Much depends on the belt

The same tests that have demonstrated the safety factors of body belts in aircraft and automobiles have emphasized the importance of mechanical excellence of the devices themselves. In other words, any old web belt and fittings will not suffice as a suitable safety device.

The Chicago Fire Department pioneered the installation of safety belts on fire apparatus in 1951. This was done as a result of a comprehensive study of injuries in vehicles in fire service. The present Chief Engineer of the Chicago Fire Department had a background with the Chrysler Motor Company as a test driver in 1934 at the Century of Progress Proving Grounds at which time the engineers recommended that test drivers be lashed to the seats. In the dormant years this idea was still prominent in fire department engineers' minds and as a result, like all embryo plants, it had to blossom one day—result safety belts on fire apparatus today—automotive industry follows the fire service.

As a result of this, to the present date 142 pieces of fire equipment in that city are equipped with safety belts. The program will be continued until the entire fire department is equipped. It is estimated that this program will provide safety belts for all personnel on all types of equipment. This program has already proved its justification in several hook and ladder accidents in which the tillerman received no injury whatsoever, due to being held fast in his tiller seat rather than being catapulted by the impact to the street.

The type of safety belt that is being installed on Chicago fire apparatus, is made of 3-inch preshrunk nylon webbing. The buckle and webbing assembly has a tested strength of 15,000 pounds.

In St. Louis, Mo., Joseph P. Sestric, Director of Public Safety, has ordered tillerman seats on 19 of the fire department's ladder trucks equipped with safety belts. The belts are reported made of nylon to withstand 4,000 pounds pressure.

Director Sestric said that every fire truck purchased in the future will have a cab enclosure to insure safety to fire fighters riding the front seat. □□

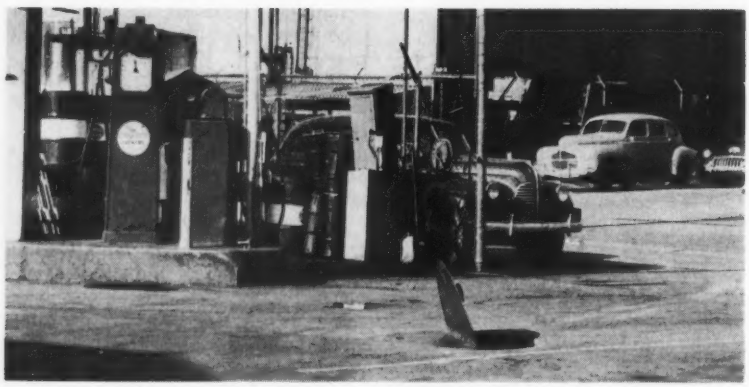
Accidental movement of an LPG truck which was not chocked broke the fill pipe inside this pit leading to a large underground storage tank. The resulting geyser of LPG created an unparalleled disaster peril in the heart of Los Angeles' crowded downtown industrial district

—LAFD Photos by Cecil Lynch

L. P. Gas Pipe Rupture Creates Disaster Peril in Los Angeles

Swift Precautionary Moves By Fire Department Prevents Ignition of Gas

By PAUL C. DITZEL



Teamwork by members of the Los Angeles Fire Department, who responded to a severe rupture in this pit containing controls to an underground storage tank loaded with LPG, averted a catastrophe. The department's LPG specialist, Inspector John Willis, entered the vapor cloud and located a jammed shut off valve

A VIOLENT RUPTURE in a squatty pit holding controls of an underground tank loaded with LPG (liquefied petroleum gas) recently created a disaster potential in the heart of Los Angeles' crowded downtown industrial district.

The break in the LPG system spewed a geyser of raw liquefied petroleum gas into the air over the Carnation Creamery at 1634 North Main Street. The gas almost immediately vaporized into a gigantic cloud which, if ignited, could have touched off an explosion rivaling in proportions the famous Texas City disaster.

Courageous action displayed

The story of how the Los Angeles Fire Department met this emergency and through sheer courage averted a catastrophe is of significant interest to the fire service and moreover provides a basis for a review of the entire problem of LPG fire safety.

The once-in-a-million-years chain of circumstances leading up to this problem, perhaps unparalleled in the entire history of this nation's fire service, started at 6 o'clock in the morning.

A truck and trailer loaded with a 60-40 blend of propane and butane pulled into the yard of the creamery. The driver unloaded the contents of his trailer into the 5400 gallon tank and then towed the trailer out to the street where he uncoupled it. Either through carelessness, haste or oversight, he neglected to chock the truck's wheels when he began unloading the truck compartment.

At 9:15 a.m., when the unloading was completed, the driver climbed into the cab and reached for the rod to take the pump mechanism out of gear. Instead, he accidentally hit the road gear lever and the truck, still connected to the fill pipe, bolted forward five feet and stalled.

Although the rubber hose stretched, it did not break. But the fill pipe did and the liquid LPG under pressure spurted from the 2-inch break. An automatic internal valve in the pit should have closed, but the break in the fill pipe jammed the valve open.

The driver spread the alarm and the dairy supervisor pulled the master switch. Ironically, an ice cream truck freezer motor was operating just a few feet from the pit's mouth, but fortunately the supervisor's quick work shut off this potential ignition point.

While the supervisor notified the Westlake Signal Office of the Los Angeles Fire Department, another dairy

Conutinued on page 230

Detroit Rules Against Outside Jobs

Departmental Rule Prohibiting Engaging in Outside Occupations to Be Enforced

ONE OF THE MOST troublesome and controversial problems facing many full-paid fire departments is that of the fire fighter engaging in work outside and apart from, or in addition to, his regular duties as fireman.

Editorially, this Journal has attempted to review the problem in the light of the stand taken by administrative heads of department and representatives of firemen's organizations, without bias or prejudice.

The situation, which has come about largely because of the substandard pay schedules existing in so many municipal fire departments, is being met in different ways by different department administrations. The problem likewise is more acute in some departments than in others. But, as FIRE ENGINEERING has pointed out, it is something that has a marked impact upon fire department efficiency, morale and progressiveness.

Latest information received on this score comes from Chief Edward J. Blohm of the Detroit Fire Department, who writes: "After reading your fine and commendable editorial in the December, 1955 edition of FIRE ENGINEERING, I cannot resist the temptation to send you a copy of our recent departmental directive on the same subject which was issued November 9, 1955. . . ."

The directive to which Chief Blohm refers follows:

DIRECTIVE NO. 41

To all members of the department

Subject: Special attention directed to:

Article 12, A, Section 32, page 57 of the department Rules and Regulations regarding employment in or engaging in any other occupation or business.

Numerous complaints have been received regarding members of this department being employed or engaging in other occupations or business, which is in violation of the Rules and Regulations of the Detroit Fire Department.

The Rule reads:

Section 32. Every member of the department shall devote his whole time to the business of the department and is expressly prohibited from being employed in or engaging in other occupation or business.

The above rule was instituted as a condition of employment by the Board of Fire Commisioners many years ago for several excellent reasons that should again be brought to the attention of all members of the department.

1. To insure that members reporting for duty following their leave day are properly rested and physically fit to perform their assigned duties as members of the fire department.

2. Additional time off duty in the form of reduced working hours has been provided for fire fighters to allow more time for recreation, rest and for family obligations. To utilize this extra time off for other employment defeats the basic purposes for which hours of employment have been reduced over the years.

3. To eliminate complaints from citizens, unions and other organizations that firemen were taking jobs away from private citizens who were thereby thrown out of work and deprived of their livelihood, or available overtime that ordinarily would be worked by private citizens. There is no question that such practices are morally wrong and detrimental to the best interests of everyone concerned.

4. To eliminate citizen complaints that off-duty firemen were underbidding on jobs or contracts to perform work or provide services that ordinarily are performed by recognized skilled tradesmen or organized union members.

5. To eliminate the possibility of injuries occurring in outside employment resulting in time off compensable by the City of Detroit, or the member's total incapacitation with a resulting non-occupational pension, thereby jeopardizing the pension and sick leave protection of all members of the department.

6. To attempt to overcome and avoid any situation as practiced in other cities whereby firemen are admittedly greatly underpaid, but permitted to work in other employment on their leave days to supplement their inadequate income.

7. The Board of Fire Commissioners recognized many years ago that a member working more than one full time job could not give his full time and attention to the demanding job of a modern fireman and could not exert the necessary energy, interest or thought required to justify the expenditures of funds to provide the benefits rightfully due our firemen in the name of efficiency and service to the public, commensurate with the salary and pension costs required.

In order to obtain adequate and reasonable wages, pensions, sick leave, etc., commensurate with the duties and responsibilities of our fire fighters, the department believes in the interests of efficiency, good public relations, morale of the department, that our firemen should not compete with private citizens for jobs to be performed during their off duty hours.

It is therefore the future policy of this department that every such complaint received shall be thoroughly investigated. Members found violating Section 32 shall be subject to charges and to immediate suspension from the department. All members are warned that violators will be severely dealt with in the future.

Burns House to Get Back to City

A 14-year-old Scituate, R. I., girl burned her house to the ground on Nov. 30 because she resented rural life, police and fire officials reported. The girl, whose name was withheld, had moved from West Warwick, R. I., (population 23,000) to the Hollywood section of Scituate, (population 4,500) two months ago.

Police Chief John J. Crowley and fire officials said the girl set fire to curtains in a bedroom and fled. The four-room home, owned by Clifford Stone, was destroyed in the fire. Police found the girl hours later, about six miles away.

Chief Crowley said she told him she disliked living in the country. She said it was too quiet after her life in West Warwick. Crowley turned the girl over to Juvenile Court authorities.

—Tom Magner

OVERHAUL AND SALVAGE—*Continued from page 219*

ment. Lacking the essentials of covers, poles or such simple things as hammer and nails for example, may spell all the difference between effective and ineffective salvage dewatering.

As soon as practicable, salvage units should enter the fire floor to begin dewatering and other salvage operations at that level. If the necessary steps have been taken to direct water out of the building from the floor or floors below the fire, and the addition of water from the fire floor will not overburden, or flood the dewatering facilities, it may be advisable to cut suitable openings in the fire floor to direct the discharge to those facilities below. However, if the water on the fire floor can be discharged directly out of the structure from that floor, this is preferable.

Rapid removal of trapped water on floors and from ceilings is important if for no other reason than to avert prolonged dripping which will require leaving covers in place longer than should be necessary.

The author has made no attempt to discuss dewatering of small, average, fires such as occur in households, in which little water is used in extinguishing operations. Usually employment of sponges, squeegees, mops and rags will suffice to remove this water content. Further data on dewatering will be included in the succeeding chapters on basement dewatering and salvage operations relating to various individual occupancies.

Acknowledgement: The author gratefully acknowledges the assistance of Chief Joseph Scanlon, Superintendent, and Sergeant George Post, of the New York Fire Patrol in the preparation of this Chapter.

ORPHANAGE GOES UP IN SMOKE—*Continued from page 225*

for firemen and the Buffalo chapter of the American Red Cross was mobilized at the fire grounds.

The four-alarm blaze at the orphanage was the city's first since June 27, 1950, when flames leveled a four-story brick warehouse at Lord and Oneida Streets, causing an estimated $310,000 damage. Some 28 nearby structures also were damaged.

The blaze also recalled the $7,000,000 fire in the old 65th Armory in nearby Masten Avenue on May 8, 1931. Other four-alarm fires in Buffalo's history included one in the D.&C. Dock and warehouse in 1928.

The fire in the orphan home was the second in its 81-year-old history. On the evening of Ash Wednesday, March 5, 1919, Sister Mary Anselma, then sister superior of the home, went to the basement to light the newly installed rooms of the cooking class in preparation for an inspection visit by the home's directors. Sister Anselma discovered a fire in the boys' playroom at the west end of the basement. Again, the nuns, members of the Third Order of St. Francis, fought their way through smoke and fire to lead the children to safety. Damage at this blaze was estimated at $150,000.

The Rt. Rev. Msgr. Roman J. Nuwer, P.A., pastor of St. Mary of Sorrows Church and president of the home's board of directors, said the burned-out orphanage probably will not be rebuilt. He pointed out that because of a recent trend toward placing orphaned and dependent children in foster homes, "nearly all orphanages are underpopulated." The orphans perhaps will be moved permanently to the Cheektowaga home.

L. P. GAS PIPE RUPTURE—*Continued from page 228*

worker saw the the liquid LPG streaming across the yard and out into the street. The inflammable river headed for the open furnaces and drop forges of a foundry directly across the street. The dairy worker ran to the foundry and told workers there to shut down the plant. Luckily, the liquefied gas ran off into a storm sewer drain before it reached the foundry.

When Chief Homer Hall of Battalion 2 arrived, he radioed for a second alarm assignment as he saw a sizable vapor cloud boiling up from the spouting gas. First alarm apparatus immediately laid lines to protect exposures when the gas blew. There seemed little doubt at that time that the vapor cloud would find a source of ignition.

Other firemen raced through nearby buildings, including a boiler factory, a winery and homes, helping workers shut off all potential sources of ignition. Police and firemen evacuated 300 people from the area and plant workers were sent home. Countless gas pilot lights were turned off, fork lift truck motors in a warehouse were stopped and every possible precaution was taken. Yet a mere spark, perhaps from an arcing trolley wire or the careless scuff of a nail sticking out of the heel of a shoe, could have touched off a disaster.

So cautious were firemen that fire apparatus was pushed by hand to locations on the leeward side of the enormous cloud bulging ever larger over the area.

Captains Leo Najarian and Don Wilson of the Fire Prevention Bureau estimated the vapor cloud as equal in explosive power to 105 tons of dynamite. The large loss which could have occurred is indicated by figures prepared by them:

"At normal atmospheric pressure, the volume of gas released would occupy roughly 180,000 cubic feet, enough to cover a 300′ by 600′ city block to a depth of one foot.

"Mixed with the proper proportions of air, 8,250,000 cubic feet of flammable and explosive vapor would be formed, enough to cover the city block to a depth of some 40 feet."

While fog streams were used to create a turbulence in the air, which aided in dissipating the vapors, the L.A.F.D.'s liquefied petroleum expert, Inspector John W. Willis, volunteered to enter the vapor cloud and attempt to shut off the jammed valve.

Fellow firemen covered Inspector Willis with a protective umbrella of fog as he approached the 42-inch wide pit. A refrigerating action accompanying the vaporization had formed a mound of slush and ice over it. Inspector Willis, who was familiar with the 4-foot-deep pit's layout, inasmuch as he supervised its construction two years before, unsuccessfully probed in the bubbling mass with a pike pole for the jammed valve.

When Inspector Willis groped in the pit for the valve, his arm was instantly seared by the frigid cold. The temperature of the water, LPG, slush and ice was estimated at 46 degrees below zero in the pit. Yet, one spark could have transformed that frosty mess into 3600 degrees of white hot fury!

Only after considerable difficulty, and with extreme peril to himself, was Inspector Willis able to effect a shutoff. By the time he got the valve shut, the 5400 gallons of LPG were virtually dissipated. He finally reached the valve by crawling on his stomach to the lip of the pit and with his face a scant few inches from the bubbling mass reached down inside and felt for the valve.

Inspector Willis had decided against using a mask while working inside the zone of penetrating gas, and just as he turned off the valve, he lost con-

Continued on page 233

"Best hose ever" Chief says of EUREKA Multiple-Woven with Dacron Filler Cords

That's the considered verdict of the Chief* of one of the first fire departments to acquire this lighter, stronger, more flexible hose. After nearly five years' use, he still enthuses, "I used to swear by Eureka's all-cotton multiple-woven, rubber-lined fire hose. Now, woven with Dacron filler cords, it's the *best hose ever!*"

It's not hard to understand his enthusiasm when you consider that a hose gains both its *strength* and *flexibility* from the filler (circular) cords. Also, the smaller, stronger Dacron filler yarn, which replaces about half the cotton yarn in the jacket, *weighs only one-third as much!* Imagine, then, all these advantages of Dacron filler yarn combined in a hose woven on Eureka's unique looms that interweave *all plies* into a single jacket that leaves no space to harbor water or dirt!

Your Eureka representative will gladly show you this "best ever" fire hose. Write or wire today. Remember, he is a fire hose specialist! *Name on request

Note how criss-crossing vertical cords tie all plies into one solid body.

"For greater protection to life and property"

EUREKA FIRE HOSE

Since 1875, Specialists in Manufacturing Circular-Woven Rubber-Lined Fire Hose

1 Market Street • Passaic, New Jersey *Division of United States Rubber Company*

CRASH KILLS TWO MORE FIREFIGHTERS

SECOND SUCH ACCIDENT IN LESS THAN TWELVE WEEKS

Let's stop this!

The Diamond S Safety Belt Can Avoid These Headlines.

Comm. Cavanaugh and Chief Connors inspecting Diamond S Safety Belts to be used in N. Y. Fire Dept. equipment.

- Yes—the Diamond S Safety Belt has been approved by the New York Fire Department and others throughout the Country.
- **The Diamond S Safety Belt is designed and engineered specifically for Fire apparatus and is backed by over 20 years of manufacturing experience.**
- **The Diamond S Safety Belt has the phenol impregnated tip—the only one recommended by Cornell Aeronautical Laboratory and also used by the United States Government.**
- **The Diamond S Safety Belt is available on Mack, American LaFrance, Ward LaFrance trucks and others. SPECIFY DIAMOND S.**

The Diamond S Safety Belt Meets all Requirements

Also available for:

Police Cars
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Private Cars (available in colors)

- *Call your dealer for information or write direct—but do it now—your life and the lives of your men may depend on it.*

DEALERS
Write for further information

- **Chief—We know you want to protect the lives of your men—The Diamond S Safety Belt will make your men part of your equipment. They will feel and be secure—cannot be thrown from apparatus—Quick release buckle on and off in seconds. Do not delay, install the Diamond S on all equipment.**

SERVICE BELT COMPANY

810 BROADWAY NEW YORK 3, N. Y.

Continued from page 230

sciousness. He was quickly revived in the dairy yard.

A special training bulletin prepared by the Fire Prevention Bureau of the Los Angeles Fire Department was made available to readers of *Fire Engineering*. The concise report admirably sums up the qualities of LPG and emergency procedures to be followed:

"LPG normally is stored in a vessel or tank under sufficient pressure to remain a liquid. The gas is heavier than air and if not dissipated may flow like water to lower levels such as basements, pits and storm drains. This condition could create a hazard which might continue to exist after the apparent emergency is past.

"LPG has an ignition temperature above 800 degrees Fahrenheit and a flash point of approximately −75 degrees Fahrenheit. The flammable or explosive range of the vapor is approximately 2 to 9 per cent by volume with air.

"The gas is transported through cities in large tank trucks and is stored in large and small tanks, both above and below ground for standby and reserve fuel and heating systems. It is also used in torches for cutting metals, as a substitute for natural gas in heating devices and appliances and as a motor fuel instead of gasoline."

The LAFD Fire Prevention Bureau also discussed emergency procedures to be followed:

"Because of the inherent hazard . . . and the increased use of liquefied petroleum gas, re-emphasis of precautions and proper procedures to be taken at the scene af leaks and spills should be made. These recommendations apply to conditions where ignition has not taken place and where substantial quantities are involved.

"There is no sure method of determining the safe limits of the vapor area without proper testing equipment; however, all areas where its distinctive odor is present should be considered unsafe.

"Lines should immediately be laid and numerous fog or spray streams provided.

"Prevent all vehicles from moving through the vapor area under their own power. This includes apparatus and police cars.

"Report to the signal (or alarm) office giving all particulars of the incident and request testing equipment, explosimeters, the fire prevention engineer or deputy on call, adequate police aid to control vehicular traffic and response from utilities affected.

"Eliminate all dangerous sources of ignition nearby as soon as possible and keep a check of adjoining areas, as the explosive mixture may travel a considerable distance.

"Evacuate all persons to safe location.

"Enter the vapor area only if a shutoff can be effected and then only under the protection of fog or spray streams. Remember these vapors are not soluble in water, but fog and spray streams create air currents which help dissipate the vapor.

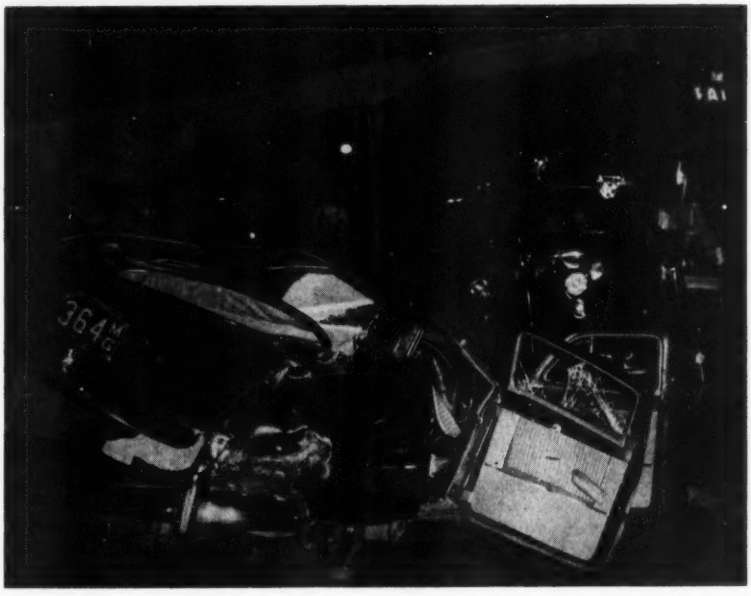
"Self-contained breathing apparatus or hose masks must be used when rescuing persons from basements, manholes or pits."

Chief officers of the Los Angeles Fire Department took notice of the courage of the men whose teamwork averted disaster, and especially that of Inspector Willis.

An official commendation of Inspector Willis said in part: "He certainly made a valiant effort and in the face of imminent danger of ignition of the gas. . . . The emergency lasted about three hours and Inspector Willis worked, thoroughly soaked and constantly exposed to great personal jeopardy during the entire period.

"Surely his actions were in accord with the highest traditions of the fire service—protection of life and property with utter disregard for personal safety and exceeded, I believe, the call of duty under the circumstances."

Chief and Driver Killed Responding to Simultaneous Calls



Wrecked car of Deputy Chief John Doremus, of Passaic, N. J., and Hook and Ladder Truck after collision while en route to simultaneous alarms.

A combination of tragic circumstances involving the response of a fire chief to one call, and a ladder truck to another, brought death to the chief and his aide in Passaic, N. J., on December 19.

Passaic Deputy Chief John Doremus and his driver, Edmund C. Hutchinson, were answering a call received at fire headquarters at 6:14 P.M., that two persons were trapped in a stalled elevator in an apartment on State Street. Aerial ladder No. 1, newest piece of equipment in the Passaic Fire Department, was responding to an alarm received from a dwelling in the Passaic Park district.

Chief Doremus was picked up by his driver at his home, and his car was proceeding east on Passaic avenue en route to the Aspen Place apartments, scene of the elevator mishap. The aerial ladder was traveling south on West Main avenue.

Both vehicles were sounding their sirens as they approached the Passaic avenue intersection. Department officials believe that because of this, neither driver heard the warning signal of the other's vehicle. Each apparently assumed he had the right-of-way at the crossing, not knowing the approaching vehicle was a fire department car. It is said the deputy chief's car had the green light.

The front of the heavy ladder truck struck the chief's auto about in the center at the driver's side, crumpling the car like an eggshell. Both vehicles, wedged together, traveled on, swerving to the left of the road and still wedged, jammed into the steel rail fence along the Erie Railroad right-of-way. The locked vehicles came to a stop about 150 feet south of the intersection.

Hutchinson, thrown out of the car, was caught under the wreckage. The chief was crushed in the smashed car and died almost instantly. His driver died en route to the hospital.

The ladder truck was being driven by Fire Lieutenant Emil Stefanacci with

Fireman Edward Nolan at the tiller. They were the only two on duty at Ladder 1 headquarters in the Municipal Building when the still (telephone) alarm was received at 6:20 p.m. The crash occurred about two blocks from the fire station.

"The engine was still cold and I had one foot on the accelerator and the other on the siren as we approached Passaic avenue," Lieutenant Stefanacci said. "The siren was going full blast. When we got to Main and Passaic, I think I had the red light, but it's usual procedure to go through with siren working in answering alarms.

"The road was clear. There was no traffic coming across Passaic street. The truck was going about 20 miles an hour but I can't say definitely because my eyes were not on the speedometer. . . . We usually go about 25 miles an hour with such a heavy truck to a fire.

"All of a sudden the chief's car came through from the right. I didn't learn until later it was responding to an entirely different call at Alfred Speer Village."

The lieutenant said he tried to avoid a collision by veering to the left, but it was too late. □□

Fire Department Takes to the Air

A "third" dimension has been added to Los Angeles County Fire Department.

It is a new helicopter acquired the first of the year by Los Angeles County.

The unit will be operated by the Sheriff's Department, for its use and that of the Fire Department and the Life Guard service.

Captain Sewell Griggers, commander of the Sheriff's Aero Squadron, will pilot the craft.

County Fire Chief Keith E. Klinger was one of the officials primarily responsible for the county's acquisition of the aircraft.

"We will have many uses for a helicopter in fire fighting," the chief pointed out. "Particularly in mountain work such aircraft have proved valuable for shuttling of men and supplies as well as in reconnaisance work."

The chief added that the aircraft already has been used by Forester L. M. VanWagner of his department for extensive reseeding work in the areas burnt off by a late season brush fire in the heavily-populated Verdugo Hills area.

In the past, the County Fire Department has relied on the generosity of Douglas Aircraft Corp. and the United States Forest Service for use of a helicopter when needed.

Chief Klinger also has a conventional passenger car and an all-wheel drive jeep at his disposal.

But a helicopter will be extremely useful, he pointed out, for trips to Catalina Island, protected by his department, 26 miles off the mainland in the Pacific.

Eventually, it is expected the Fire Department will have a helicopter for its exclusive use.—*Cliff Dektar*

Captain Sewell Griggers (left) of Los Angeles County Sheriff's Department and Los Angeles County Fire Chief Keith E. Klinger look over map and discuss reseeding operations in Verdugo Hills, for area burned over by brush fire—*L. A. County F. D. Photo*

Firemen Injured at Magnesium Blaze

Heavy clouds of smoke rise from fire which originated in freight car at Bridgeport, Conn., on January 18, in which six fire fighters were taken to Bridgeport Hospital

An oil heater, which was overturned accidentally in a railroad freight car at Bridgeport, Conn., on January 18, resulted in fire and a series of explosions and injuries to six firemen battling flames in scrap metal filings and magnesium.

Fire officials said the oil heater was being used to keep workmen warm as they were loading a freight car with the scrap metal. It quickly ignited the scrap metal as it overturned, and caused a blaze which burned for ninety minutes.

Explosions in the scrap magnesium piles rocked the East Side area of the city, resulting in the blowing out or cracking of windows of several homes. The impact of one of the explosions also caused one side of the freight car to be ripped open.

The freight car was on a siding in the rear yard of the Stratford Metal and Rubber Company, 1558 Barnum Avenue.

Most seriously injured was fire fighter Edward Motasky, who received severe burns of the face, hands and body. Other firemen taken to Bridgeport Hospital from injuries were Asst. Chief Edward F. Bannon, fire fighter Louis Tolraya, Lieut. Elmer Riker, Lieut. Ernest Papp, and fire fighter John O'Connell.—*Tom Magner*

Ontario Chiefs Adopt Salary Scale Resolution

At the annual meeting of the Ontario Association of Fire Chiefs, held at Toronto, November 17, last, the following resolution, setting forth salary differentials for all ranks in the fire service, was unanimously adopted:

WHEREAS: The Ontario Fire Chiefs Association is of the strong opinion that municipal councils should recognize the increasing training, knowledge and responsibility of fire department officers as their rank increases by paying an adequate and just differential in the salaries for the various grades of officers of at least a 15 per cent salary differential between each grade, and

WHEREAS: It is the opinion of the Ontario Fire Chiefs Association, supported by the Canadian Association of Fire Chiefs and the International Association of Fire Chiefs, that no fire chief should be paid less than two and one-quarter to two and one-half times the basic salary of a first class fire fighter with a higher amount in the larger municipalities, and

WHEREAS: This Association feels the duties and responsibilities of fire officers deserve recognition by minimum pay rates.

THEREFORE BE IT RESOLVED: That the members of this Association take action to make their municipal councils approve the following salary differential:

For a lieutenant or junior captain, an increase of 15 per cent over the salary paid to a first class fire fighter to give him a salary scale compared to a fire fighter of 115 per cent.

For a captain, a further increase of 15 per cent to give him a salary scale of 130 per cent of the salary paid to a first class fire fighter.

For a district chief, who has substantially greater responsibilities, an increase of a further 30 per cent to give him a

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★ Resilient rubber bumper for protection against damage

★ Adjustable through all angles of fog

★ Positive stream positioning — by feel or sight. Clicks into fog patterns or straight stream

★ Swivelling "Rocker Lug" base — handle is always on top

You too will agree — finest nozzle of its type

★ Corrugated no-slip grip

★ High gallonage

★ Easy pattern indicators

★ Akron quality ball shut-off

★ Man-size handle

PERFORMANCE DATA
at 100 P.S.I. Nozzle Pressure

STYLE	SIZE	NARROW FOG GPM
1209	¾" - 1"	24
1218	1½"	95
1219	1½"	125
1229	2½" for PP	250
1239	2½" Dir. Con.	250
1249	2½" with PP	250

AKRON BRASS

FIRE FIGHTING EQUIPMENT

Akron Brass Mfg. Company, Inc. • Wooster, Ohio

salary rate of 160 per cent of that paid to a first class fire fighter.

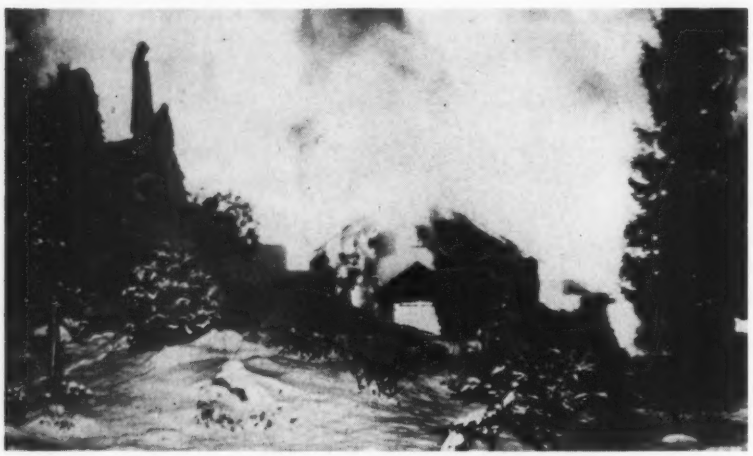
For a platoon chief or assistant deputy chief, a further 15 per cent to give him a salary scale of 175 per cent.

For a deputy chief a salary scale of 190 per cent.

For a chief, having in mind the responsibilities he solely must bear, an increase of at least 30 per cent more than the salary paid the deputy chief, to give him a salary scale of not less than 220 per cent of the salary paid to a first class fire fighter in his municipality, with a further 5 per cent increase for each 50,000 population.

And that the Provincial Federation of Ontario Fire Fighters be asked to support this differential in negotiations with their municipal councils.

Fire At Monastery Fatal



As fire destroys Our Lady of Grace monastery in North Guilford, Conn., on December 23, a statue of Our Lady of Grace stands, hands upraised, as if to bless efforts of firemen who fought in vain to save the monastery. Three cloistered Dominican nuns died in the fire, one was injured and forty escaped. Lack of water made efforts of firemen fruitless

Three nuns perished and another was injured at North Guilford, Conn., on December 23 in a fire which destroyed the monastery of an order of Dominican nuns.

The charred bodies of the three were found in the wreckage of the monastery of Our Lady of Grace after the fire had burned itself out. A fourth nun suffered a possible leg fracture fleeing the blaze. Some forty others escaped without injury, and found shelter at AlbertusMagnus College in New Haven.

The monastery, so designated because it was a home for the cloistered religious whereas convents house members of orders dedicated to active life, was built by the nuns themselves, aided by labor and materials donated by laymen. One of the three buildings was fashioned by joining together two barns, dating back to the Revolutionary War period.

Brother Paul Gilbert, in attendance at the monastery, which was founded in 1947, said the blaze was believed to have started in the main building, a converted frame farmhouse, from a short circuit in the electric wiring. Firemen were thwarted by the lack of water.

Members of the Guilford Fire Department, who received the first call for the fire at 9:20 p.m., found the building all ablaze when they arrived. The fire burned for more than four hours as Branford, Durham and Killingworth firemen aided the Guilford department. A small brook was the only source of water and it proved inadequate.

The monastery was situated near the intersection of Route 77, the Middletown-Guilford road, and Route 80, which parallels the Boston Post Road between New Haven and Saybrook. A wooded area concealed it from both highways, however.—*Tom Magner*

Recommends Dropping of "Class B" Pump Rating

Most momentous decision reached by the N.F.P.A. Committee on Fire Department Equipment, Chief Henry Thomas of Hartford, Conn., chairman, at its meeting January 17-18 in Rochester, N. Y., was to drop all Class B pumper ratings from the specifications for motor fire apparatus.

The Committee's recommendations, if approved and adopted by the National Fire Protection Association at its next annual conference (May, 1956), will become standard specifications for motor fire apparatus and form the basis for the proposed revision of Pamphlet No. 19 *"Suggested Specifications of the National Board of Fire Underwriters for Motor Fire Apparatus as Recommended by the National Fire Protection Association and Approved by the International Association of Fire Chiefs."*

The Committee is composed of representatives of the three associations; the Technical Advisory Committee of the Motor Fire Apparatus Manufacturers' Association; various state insurance rating boards and inspection bureaus as well as representatives of the Federal Civil Defense Administration and other government agencies. The parent committee includes the following sub-committees on: *Fog Nozzle Studies,* Chairman Robert Byrus, University of Maryland Fire College; *Heavy Steam Appliances,* Chairman Deputy Chief Louis E. Vogt, Rochester Fire Department; *Water Tank Trucks,* Chairman A. H. Gent, Illinois Inspection Bureau; *Weight Distribution,* Chairman John E. Barman, Missouri Inspection Bureau; *Fire Hose,* Chairman Albert Kimball, Hingham, Mass., Fire Department; *Revision of Standards,* Chairman J. N. Pryce, Dominion Board of Insurance Underwriters; and *Publications,* Chairman Roi B. Woolley, FIRE ENGINEERING. Warren Y. Kimball, N.F.P.A., is secretary to the Fire Department Equipment Committee.

Reports of the various sub-committees were received and acted upon by the Committee as a whole. Their findings will eventually form revisions of pamphlets on specifications for fire hose, portable pumping units, water tank trucks, etc.

In Rochester, the committeemen and visitors were guests of the Rochester Fire Department, Commissioner Kenneth C. Townson and Chief Walter J. Adams. Sessions were held at the Fire and Police Training Academy. The group toured Rochester's fire stations, Fire Alarm Headquarters, and Fire Department Maintenance Shops, and members were entertained by Commissioner Townson at a dinner held at the Rochester Club. □□

Nevada Steps Up Fire Protection

Rapid growth of fire fighting facilities in Southern Nevada will continue in 1956, a survey indicates.

The Las Vegas Fire Department had just let bids for construction of one new station and will construct one more house and relocate another.

Contracts have been let for four new triples, and wiring for the desert city's new alarm system is underway. A new aerial also may be purchased this year.

The city of North Las Vegas also soon will receive a new triple for its fire department.

Clark County Fire Department, which protects the fabulous "Strip" gambling casinos and hotels will soon build a second station back of the Stardust Hotel. A new triple for this house already has been received.

Clark County also will purchase a crash truck for McCarran Field and has purchased two used rigs for supervised volunteer protection in nearby communities.

Henderson, halfway between Hoover City and Las Vegas, has received delivery of one new triple.

Additional paid personnel will be added to Las Vegas and Clark County departments as soon as the new stations and apparatus go into service.

Clark County now also has a full-time captain assigned exclusively to fire prevention duties.—*Cliff Dektar*

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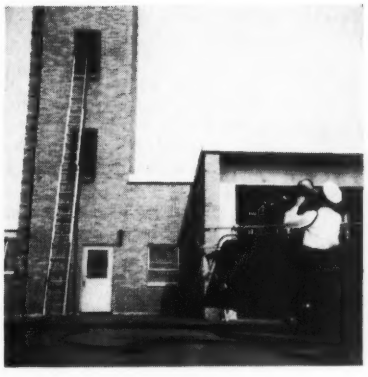
Audio HAILER gets your orders across *Instantly!*

Fire chiefs know a command not heard can mean the difference between life and death at fires. But there's no chance of this happening when an Audio Hailer carries commands through the deafening racket. Now fire chiefs can get their orders across—*instantly and clearly.* Just press the trigger . . . and commands are amplified *1,000 times!* Cut down on fire-fighting hazards and property damage by making commands heard—*instantly and clearly.*



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I would like ☐ Brochure, ☐ Demonstration of the Audio Hailer Electronic Megaphone

FIRE CHIEF_____

CITY_____ STATE_____

Our Readers Write Us

Novel Replacement For Chimney

To the Editor:

During hurricanes Carol and Edna a great many chimneys in Essex County were blown down. During a junket to one of the seaport towns to take photographs of the damage, I came across this house in Essex County, and I believe the owner of this house believes in the saying, "Necessity is the mother of invention."

I made several inquiries in the neighborhood and found out that the owner of the house had quite a few lengths of akron pipe around his property and, after the chimney was blown down, he decided to take care of the needs by installing the present chimney as shown in the photograph herewith.

Pipeline extends chimney to roof ridge

Rather than embarrass the owner or the members of the fire service, I purposely leave out the name of the town where this is situated, but I believe you will get a kick out of it.

Edward J. Gill
Lawrence, Mass.

In Defense of Days-Off Work

To the Editor:

In regards to the letter written by former Chief G. T. L., in the column "With Our Readers," in the December, 1955 issue of FIRE ENGINEERING, it seems to me that Chief G. T. L. is telling only one side of the story. In the first place if he thinks firemen work on their day off because they want to, he is wrong. I am a fireman myself and work on my days off also. But, it is a question of economic necessity. I would much rather use my time off to go fishing, play golf, or even learn more about my job to make me a better fireman. However, this is not the case. I must work "on the side" in order to give my family some of the comforts of life I think they are entitled to. The wages of both policemen and firemen throughout the nation are painfully inadequate for the caliber of men they expect to fill these jobs.

It is much better for the morale of a fire department if a fireman is able to pick up a few extra bucks, in order to buy that new piece of furniture his family has been wanting, than it is to prevent him from working and let him idle his free time away worrying about how he is going to get it.

As for most firemen that do work, most of them stay clear of union controlled work. They merely pick up odd jobs that do not require the services of a full time employee, working just a few hours weekly.

Chief G. T. L. also says, "that the public has a right to the full, complete and unqualified allegiance and service of the firemen it employs." I do believe that Chief G. T. L. is right here. However, the inference is that a fireman who works on the side is not fulfilling his duty to the public. Again, I will agree with Chief G. T. L., that if the work a fireman is doing on the side is detrimental to his proper performance of duties, it should be stopped. However, he fails to elaborate on the question of how this destroys a man's efficiency while on duty. Certainly, a man stays better fit physically by working on the side which is a vital qualification in the fire service, and he most certainly is more available to a "call back" than if he were fishing, or out on the golf course or just chasing around, no one knowing exactly where he is. With a man working on the side, and a call coming to the house for help in some fire, his wife can surely relay the call to him.

I wonder if Chief G. T. L. thinks a system whereby a city whose fire force gets between $300 and $375, while their trades get between $425 and $500, will work. And this, mind you, while the fire force is having to be more skilled and have more knowledge of their job than any of the other so-called skilled trades.

In other words, if the pay of firemen were comparable with those of the trades, which they certainly should be, most firemen would limit their working on the side to the helping of a neighbor.

If working on the side were stopped, it would create a big morale problem and much unrest within the department. This one big disadvantage, to me, outweighs all the advantages that would be gained by putting a stop to the outside work.

If Chief G. T. L. would look back at wages and working conditions on fire departments, say about 20 years ago, he would see that firemen were paid much better than any skilled trade was at that time, and working on two jobs was unheard of.

The fireman, in days past, by comparison to his fellow tradesmen, was the highest paid of the group. He also had, as Chief G. T. L. has said, "The heroic respect and admiration of his community." Now, all he has, is the heroic respect and admiration, which is very nice, but doesn't put food on the table or pay the rent.

I will not sit here and sound off, either, without giving my views on how this problem can be licked. One way would be to get a list of all the skilled trades that operate in your community (mind you, I said skilled trades; not laborers and truck drivers). Let your city council pick five trades and your fire department pick five trades. Take the ten trades together, add up their total monthly pay, based on 40 hours a week, get their average pay by dividing by ten. Take this figure and give your firemen 85 per cent of it, which is certainly a fair percentage. Present this to your fire department and your city council with the stipulation that, if this is granted, all work on the outside will cease. I'll bet you that you will have no more trouble with your men working at part-time jobs.

Orville W. Mertz
Rochester, Minn.
Jan. 10, 1956

Buffs to Meet at Newark

To the Editor:

In the December issue of FIRE ENGINEERING you have an article on Page 1199 under the title "Fire Fans Convene in Chicago." No doubt you will recall the pictures and column refering to the International Fire Buff Associates Third Annual Convention held in Chicago the weekend of July 1, 1955. Inadvertently, you failed to include members from the city of Newark, N. J., as attending the convention.

The Bell and Siren Club, Inc. of Newark, N. J., was represented by Mrs. Ruth Conradi, Chief Dispatcher and only female member of the Bell and Siren Club, and also Mr. William Conradi, vice president of the Eastern Division of the IFBA, and Mr. Ed Massman and Mr. Paul Hollywood. Incidentally, the three mentioned above are shown in the picture on Page 1199.

Most important, because of our activities and national recognition, we were selected to be the host organization for the fourth annual convention to be held in Newark, N. J., at the Robert Treat Hotel, June 28-30 of this year.

Fred J. Bissinger
Jan. 17, 1956

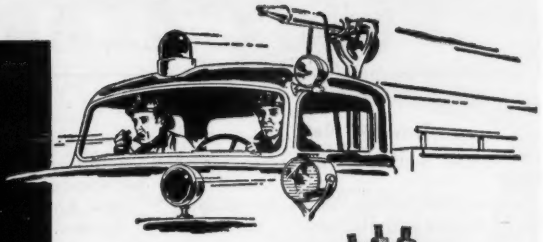
Fireman Electrocuted

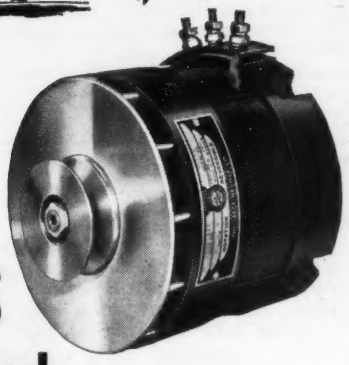
A Las Vegas, Nev., fireman died on December 18 in a freak accident while attempting to rescue a cat from a power pole.

Harold Davenport, 34, of the L.V.F.D. was electrocuted when his face accidentally brushed against a 12,000 volt power line in the Francisco Park area. The fireman was on a ladder attempting to rescue the cat, which had been on the 40-foot pole for two days.

Fireman Robert Dietz, 28, was also shaken up by the shock, but suffered no serious injuries.—*Cliff Dektar*

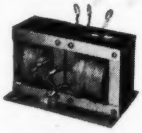
Leece-Neville

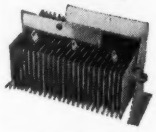




AC-DC ALTERNATOR SYSTEMS Guarantee the Current You Need to Get to the Fire... and to Fight the Fire

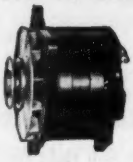
110 VOLTS FOR POWER TOOLS, LIGHTS





Installation of a Leece-Neville Transformer and 110 volt Rectifier with your L-N Alternator will provide up to 1200 watts of 110 volt d.c. current for spot and flood lights, half-inch drill, power saw etc. Send for special bulletin.

A GENUINE L-N ALTERNATOR AT A SENSATIONAL LOW PRICE



For loads up to 60 amps at 6 volts or 50 amps at 12 volts, see the new L-N Standard Alternator System that costs *less* than "extra" output d.c. generator.

Sirens, lights and 2-way radio make a heavy electrical load that can drain the battery. Leece-Neville Heavy-Duty Alternators, which replace conventional d.c. generators, have the capacity to carry the load: up to 95 amperes for 6 volt systems; to 180 amperes for 12 volt; to 100 amperes for 24 volt.

At the fire, L-N Alternators produce up to 40 amperes with the engine idling, keep batteries "up" and permit use of 2-way radio.

THE ORIGINAL AC-DC GENERATING SYSTEM—RECOGNIZED EVERYWHERE

Since 1946 more and more Fire Departments have made L-N Alternators standard. Some of these are Atlanta, Boston, Buffalo, Chicago, Cleveland, Dallas, Denver, Detroit, Los Angeles, Miami, Montreal, New York, Pittsburgh, Toronto, and many others, large and small.

Be sure to specify Leece-Neville on new apparatus and in your modernization program. For all the facts, and name of your L-N Distributor, write The Leece-Neville Company, Cleveland 3, Ohio. *Distributors in principal cities . . . Service Stations everywhere.*

YOU CAN RELY ON Leece-Neville

Automotive Electric Equipment Since 1909

TRUCK · BUS · DIESEL · INDUSTRIAL · PASSENGER · RAILROAD · MARINE · OFF-HIGHWAY

ALTERNATOR SYSTEMS

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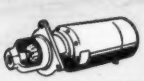


CRANKING MOTORS

REGULATORS

SWITCHES

SMALL MOTORS

FALSE ALARMS

Travelin' Nell

First Old Settler: "Where's our little Nell?"

Second Old Settler: "She's out in the woods playing with the bars."

First: "Won't the bars hurt our little Nell?"

Second: "No, she has a bicycle and she knows how to handle bars."

The courtship is a short period between the lipstick and the mopstick.

Trustworthy

The witness was a fat man with the red nose of a habitual drinker.

"So you are the superintendent of the water works, eh?" said the attorney.

"Yes, sir, and I've given perfect satisfaction at the water works for the past ten years."

"No doubt," said the lawyer, "you look like a man who could be trusted with any amount of water."

Labor Trouble

Smitty: "Sorry, old man, to hear about your wife running away with the butler."

Jonesy: "Oh, that's all right, I was going to fire him anyway."

"Here!" shouted the railroad official, "what do you mean by throwing those trunks about like that?"

The porter gasped in astonishment, and several passengers pinched themselves to make sure that it was real. Then the official again spoke to the porter:

"Don't you see that you're making big dents in this concrete platform!"

—Oliver Shield

Nutty

Spinster: Oh, I think your services are just wonderful.

New Preacher: Thanks—thanks.

Spinster: Why, until you came here, I never even knew what sin was.

License Clerk: "Do you subscribe to the thoughts expressed in that famous little poem: 'A wee bit of moonlight now and then, marries off the best of men?'

Applicant: "Oh, most certainly! If it hadn't been for the moonlight her father would never have caught us."

Sgt.: "How is it you don't like girls?"

Pte.: "They're too biased."

Sgt.: "Biased? What you mean?"

Pte.: "It's bias this and bias that until I'm flat broke."

The waitress brought him a plate of steaming dumplings and two chicken legs. Since he couldn't abide dark meat, he tried to make the waitress understand that he wanted to swap the chicken legs for white meat, but he had laryngitis and couldn't speak. When every other sign failed, he tried to show what he wanted by putting both hands on his chest. The waitress smiled, nodded her head and went out to the kitchen. In an instant she was back—with two glasses of milk.

Assigned to scout patrol in World War II, Pat and Mike provided themselves with a cowhide. Both of them crawled into it and were grazing along in cow fashion; they moved closer and closer to the enemy lines.

They were gloating over the apparent success of their trick when Pat who had the front end stopped short. "Let's get out of here," he whispered.

"What's wrong?" asked Mike.

"What's wrong?" cried Pat in muffled anguish. "It's a Storm Trooper with a milk pail!"

A pessimist is one who looks on the bright side and complains the light hurts his eyes.

It takes a lot of exercises to keep Uncle Sam fiscally fit.

Wasted Worry

A man on trial for his life was being examined by a group of alienists. Suddenly one doctor shouted at him: "Quick! How many feet has a centipede?"

The man came back in a dry voice: "Gosh! Is that all you got to worry about?"

—Punch Bowl

Traffic light: A trick to get people halfway across the street safely.

Don't Worry

Don't worry if your job is small
And your rewards are few,
Remember that the mighty oak
Was once a nut like you.

When holding a conversation be sure to let go of it once in a while.

Diner: "Hey, Lulu, whatcha mean substitootin' on me? I ordered punkin pie and you gimme apple."

Waitress: "You wouldn't know the difference anyhow, big boy. All the pies are punk in here."

The wife smiled at her husband when he got home from the office. "Poor darling," she said, "you must be hungry. Would like some tender chops with golden-brown potatoes and green peas, and some delicious apple pie?"

"No, dear," was the weary reply. "We'd better save our money and eat at home."

A Russian named Rudolph looked out the window one morning and said, "It's raining."

"No, it's sleeting," said his wife.

"It's raining, doggone it," he replied. "Rudolph the Red knows rain, dear."

Fireman's Son: "Dad, mom just backed the car out of the garage and ran over my bicycle."

Fireman: "Serves you right for leaving it on the front lawn."

Sunday School Teacher: "And why did Noah take of each kind of animal into the Ark?"

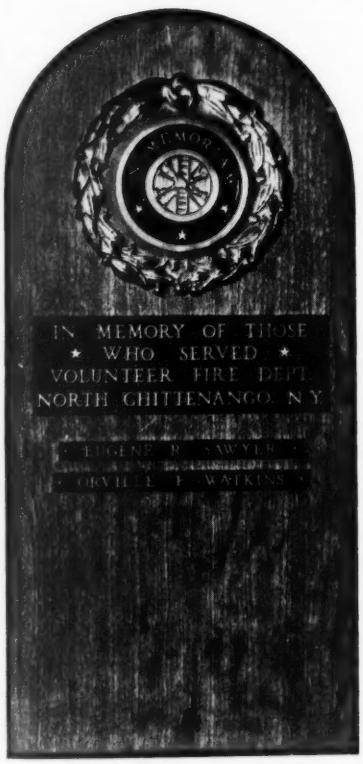
Bright S. S. Scholar: "Because he didn't believe the story about the stork."

First Wife: "My husband has no idea what I go through when he snores."

Second Wife: "Mine never misses his small change, either."

"Frankly, I'm concerned about the old man's condition—he fits that pole hole like a piston"

Fire Companies and Associations delighted at quality and beauty



Over-all size 11 x 22 inches

LEST WE FORGET

These beautiful memorial plaques are made in 10, 20, 30 and 40 name sizes. (10 name size pictured). They are expressly designed to honor deceased members of fire departments. The shield is of solid, hand-rubbed cherry, and the emblem, legend plate and individual names are of solid, cast bronze. A most suitable and attractive addition to your fire house.

$39.50

plus postage
(without individual names)

A Few Typical Comments:

"Delighted with the plaque." Sharpsville, Pa., Vol. Fire Dept.
"We commend you on making and designing such a beautiful plaque." Roseburg, Oregon, Fire Dept.
"Thoroughly satisfactory in every way." Singerly Fire Dept. Elkton, Md.
"Very pleased with the workmanship." St. John Fire Fighters' Assoc., N.B., Canada
"Again well pleased with speed, service and quality of the plaque." Nantucket, Mass., Firemen's Assoc.
"Very favorably impressed." Arlington, Va., Vol. Fire Co. #5
"Beautiful! A real contribution to the fire service." Bristol, Pa., Fire Dept.
"Outstanding beauty and workmanship." Baker, Ore., Fire Dept.
"Entirely pleased with the plaque." Firemen's Association of the State of New York.

A GREAT WAY TO SAY "THANKS" TO THE CHIEF—

To honor your active or retired Chief (or other officers) this handsome new plaque will give him a lifetime of pride and satisfaction. The perfect way for a department to say "Thank You" for a job well done.

Height: 14 inches. Solid cherry shield: ⅞ inches thick. Crest: 6½ inches in diameter, solid bronze casting, permanently colored. Attractively boxed.

$25.00

plus postage

Although first introduced to the fire service less than two years ago, these entirely new plaques have brought enthusiastic letters from fire departments and Associations all over U. S. and Canada.

We hope that your Department or Association will soon acquaint yourselves with the finest of firemen's plaques, made to honor Chiefs and all other officers, deceased members, charter members, and special plaques for all occasions.

No money in advance is required. If, after receiving the plaque, you are not more than satisfied, you may return express-collect, and not receive a bill.

Use This Handy Order Form

CITY PATTERN SHOP, INC.
NEW COURT ST. EASTWOOD STA. SYRACUSE, N.Y.

PLEASE SHIP AS FOLLOWS:

☐ Other title _____
☐ Chief's plaque

NAME AND TITLE _____
NAME OF DEPT. _____
YEARS OF SERVICE _____
SEND BILL TO _____

WE ARE INTERESTED IN OBTAINING A _____ NAME SIZE MEMORIAL PLAQUE. PLEASE SEND US FURTHER DETAILS AS TO PRICE, DELIVERY DATE, ETC. (Be sure and include the number of names desired on the plaque)

Eastman

PERMANENT—
PORTABLE COMBINATION

3way

DELUGE GUN

The "workhorse" of the fire fighting industry. A combination permanent-portable deluge gun unsurpassed in quality and efficiency — designed with large non-constricting waterways to produce a maximum flow of water at all pressures — engineered for easy handling, with safety of operation in mind. The carrying brackets are so designed that the unit may be quickly changed from permanent to portable operation. This is the gun to specify when you desire the finest in a permanent-portable combination unit.

Send for Bulletin 1-56

SCO INC. CONCORD, NEW HAMPSHIRE

SAMUEL EASTMAN CO. INC.
CONCORD
NEW HAMPSHIRE

Maintenance Men Form Association

The New England Fire Apparatus and Maintenance Men formed an organization at a meeting held January 17, 1956, in Worcester, Mass., at the new Worcester Fire Department Headquarters. Paul Marin, Supervisor of the Maintenance Division played host to the large group of men, reperesenting three states, that attended the meeting.

Chief Travers of the Worcester Fire Department welcomed the group and endorsed the idea of such an organization. He expressed the need of well trained men and well equipped shops to maintain today's highly specialized fire fighting equipment. He also stated that an organization of maintenance men could be of great value to the men themselves and to the fire departments that they represent.

Officers elected at the meeting were: President, William Storey, Holyoke, Mass.; First Vice President, Paul Marin, Worcester, Mass.; Second Vice President, Al Hunt, Brookline, Mass.; Treasurer, Francis Leavy, Pittsfield, Mass.; Secretary, Joseph Wysinski, Northampton, Mass.

Maintenance men from any fire department are eligible for membership, and meetings will be held every third Tuesday of the month until further notice.

Membership information may be secured from Mr. Wysinski, who is Supervisor of Motor Apparatus, Northampton Fire Department, 60 Masonic Street, Northampton, Mass.

LAFD Fireboat Gets Radar Equipment

Plans to equip fireboats of the Los Angeles Fire Department with radar devices were proceeding following the initial installation of electronics apparatus aboard Fireboat 2.

The equipment will enable the boats to operate under extremely adverse weather conditions and are believed to be the first on the Pacific Coast to be so equipped.

Battalion Chief Floyd Adams, an expert on water front fire fighting, said radar has been planned for some time.

"But until recently we were unable to find the equipment which would give us exceptionally close range. The equipment we have now installed will pick up objects as close as 20 to 30 feet in any direction," he said.

Fireboats will be able to pick up the direction, speed and bearing of another ship at night or in the fog, Chief Adams explained.

Captain Frank Steele, skipper of Fireboat 2, stationed on the main channel side of Terminal Island near the West Basin Turning Area, has already put the boat through trial runs with the radar equipment. The change in operation was easy, he said, because a number of the crewmen had radar training during World War II.—*Paul C. Ditzel*

Wisconsin Council Adopts Constitution

The new Wisconsin Council of Firemen's Associations, in a meeting October 29 at the Adams Fire Station, adopted a constitution.

The purpose of the Council is to bring the fourteen or more firemen's associations of Wisconsin into closer coordination in training and legislative effort, to exchange ideas for better firemanship, and to expand education for Wisconsin firemen.

The afternoon program included reports of legislation by Chief John Welsh of Mt. Hope, Legislative Chairman for the Southern Wisconsin-Northern Illinois Firemen's Association, and Chief John Pavlik, West Milwaukee, Legislative Chairman of the Wisconsin State Association of Fire Chiefs. Suggestions on firemen's training were made by Harry C. Thayer of the State Board of Vocational and Adult Education, Madison. Chief Ray Vobril was host.

Under the new constitution, these officers were elected: President, Norton T. Ames, Oregon; Vice President, Joe A. Doherty, Butler; Secretary-Treasurer, Don Bunnell, Oregon; and Trustees, Norman Spiering, Mayville; Edward Martin, Rib Lake; and Louis Arntz, Lyndon Station.

The firemen's associations present and forming the council were: Central Wisconsin Firemen's Association, Dodge County Firemen's Association, Eastern Wisconsin Firemen's Association, Jefferson-Waukesha County Firemen's Association, South Central Wisconsin Volunteer Firemen's Association, Southern Wisconsin-Northern Illinois Firemen's Association, and the Wisconsin State Association of Fire Chiefs. Their combined membership represents 202 fire departments and nearly that number of individual fire chiefs.

First Western Canada Investigation School Held

The second Canadian Fire Investigation School, and the first in Western Canada, was held October 2-3, last, at the Regina, Sask., Barracks of the R. M. C. Police. There were thirty-five candidates present from the four Western Provinces.

The school was opened jointly by Superintendent C. N. Kirk, O. C. Depot Division, R. C. M. P., and Austin E. Bridges, Fire Commissioner, Province of Alberta, who represented the Association of Canadian Fire Marshals.

The Canadian Association of Fire Chiefs and the Fire Underwriters Investigation Bureau of Canada, Inc., which sponsored the school, were represented by Chief Tom Yarnton and W. J. Enswick.

The sessions, which covered the entire subject of investigation, combustion of fire, and fires in typical occupancies, were well attended. The topics were handled by outstanding authorities who made use of the latest visual aid film material.

YESTERDAY...
A Total Loss!

1943 ... A midwestern industrial landmark, which at the turn of the century was the nation's largest tanning center was destroyed by fire with a $300,000 loss. Huge stocks of lumber, paints, oils and furniture were stored in the building. (Int. News Photo)

TODAY...
FIRES ARE FOUGHT BY ATTACK...NOT DEFENSE!

The Man with the Scott AIR-PAK
IS IN FAST FOR *FIRE ATTACK!*

YOURS IS A **FIRE ATTACK** DEPARTMENT IF YOU HAVE SCOTT AIR-PAKS ON EVERY FIRE TRUCK

A major requirement for *FIRE ATTACK* is complete breathing protection. That's why Scott Air-Paks are *FIRE ATTACK* equipment. To get in fast, through thick smoke or hazardous fumes calls for experienced firefighters and Scott Air-Paks.

Your men breathing cool, fresh air will save more lives and reduce fire losses to a minimum. Take steps now to make yours a *FIRE ATTACK* Department. Write us for complete information.

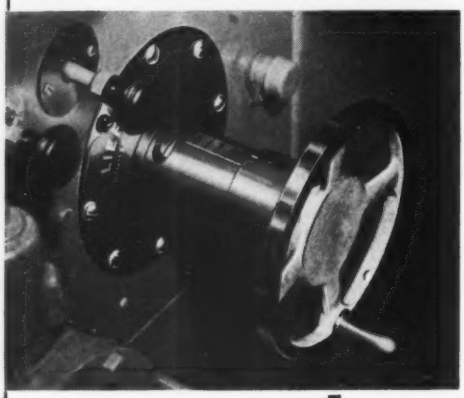
VISION UNLIMITED

New Scottoramic Face Mask now available for all Scott equipment, (standard on most models), and for replacement on your present breathing apparatus.

SINCE 1932 Scott FOR SAFETY - FOR SERVICE!

SAFETY EQUIPMENT DIVISION
SCOTT AVIATION CORP.
215 ERIE STREET LANCASTER, N. Y.
Canada: Safety Supply Co., Toronto — Branches in principal cities
Export: Southern Oxygen Co., 15 West 57th Street, New York 19, N. Y.

HANDY HALE
RELIEF VALVE CONTROL NOW AVAILABLE FOR ALL HALE 1, 2, and 3-STAGE CENTRIFUGAL PUMPS



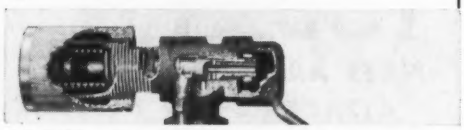
This Hale "QL" Relief Valve Control with handy "Setting" Wheel shown at left is now available for all Hale single, 2 and 3-stage Centrifugal Pumps that use a Hale Relief Valve, *regardless of age.* The wheel Control is now standard on all present Hale centrifugal fire engine pumps, and can be easily mounted on all older single, 2- and 3-stage Hale centrifugals in service. It can be mounted directly over the Relief Valve, or Panel-mounted as pictured at left to replace the older style knurled Control shown under the arrow below.

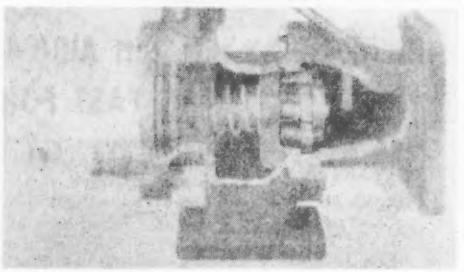
Dotted line points to older type knurled control knob on Relief Valve Control which the modern "QL" control and Setting Wheel replace.

The "QL" Control made an instant hit with all who saw and handled it at the International Fire Chiefs Omaha Convention. This advertisement is in response to the many fire fighters who asked whether it could be used to replace the older style Control. Price of a complete replacement kit including instructions on how to make the change, will be gladly furnished on request.

This opportunity to modernize your Relief Valve is another example of constant research resulting in constant improvements.

- Cost of change-over kit is reasonable and change-over can be easily made.





NOTE:

We suggest that, after you have examined the Kit Information, you place your order through the original Manufacturer of your Apparatus.

To HALE FIRE PUMP CO.—Please send us the information on how to change over our present Relief Valve Control to the modern "QL" Control.

NAME..... FIRE CO.....

CITY..... STATE.....

Our Pump is a Hale Type.....Serial No.....

Manufacturer of Our Pumper.....

HALE FIRE PUMP CO. CONSHOHOCKEN, PENNSYLVANIA.

FE

Convention Dates

Mar. 19-21—**North Dakota State Fire Officers School.** Annual meeting, Tate Teachers College, Minot, N. D. Director, Chief Gilbert C. Malek, Fire Department Headquarters, Minot, N. D.

Apr. 3-6—**Maryland Short Course For Fre Inspectors.** Annual meeting, University of Maryland, College Park, Md. For information contact, Robert Byrus, Director, Fire Service Extension, University of Maryland, College Park, Md.

Apr. 9-12 (tentative)—**Louisiana State Fire College.** Annual meeting, Baton Rouge, La. Director Robert A. Bogan, Fire Department Headquarters, Baton Rouge, La.

Apr. 12 and each Thursday thereafter until May 17—**Illinois Fire Officers School.** Sectional meeting, Danville, Ill. For information Contact Roy W. Alsip, Box 8, Champaign, Ill.

Apr. 13 and each Friday thereafter until May 18. **Illinois Fire Officers School.** Sectional meeting, Centralia, Ill. For information contact Roy W. Alsip, Box 8, Champaign, Ill.

Apr. 15-17—**Nebraska State Fire School.** Annual meeting, Grand Island, Neb. Director, Otto B. Johannes, 2604 - 12th Street, Columbus, Neb.

Apr. 23-27—**Oklahoma State Fire School.** Annual meeting, Stillwater, Okla. Director, R. J. Douglas, Head, Fire Protection Department, A. & M. College, Campus Fire Station, Stillwater, Okla.

Apr. 23-27—**Minnesota State Fire School.** Annual meeting, University of Minnesota Farm Campus, St. Paul, Minn. Director, Dr. J. O. Christianson, Director Agriculture Short Courses, University of Minnesota, St. Paul 1, Minn.

Apr. 23-27—**International Arson Investigator's Seminar.** Annual meeting, Purdue University. For information, address Professor Shelby Gallien, Seminar Director, Public Safety Institute, Purdue University, Lafayette, Ind.

May 6—**Nebraska State Fire School.** Regional meeting, Irving, Neb. Director, Otto B. Johannes, 2604 - 12th Street, Columbus, Neb.

May 7-8—**Georgia State Fire College.** Officer Training Course and Fire College, #7 Fire Station, Atlanta, Ga. Director, Harry Phillips, 46 Courtland Street, S. E., Atlanta 3, Ga.

May 7-9—**Eastern Association of Fire Chiefs.** Annual meeting, Rochester, N. Y. Secretary, Chief Edwin J. Clark, Box 328, Wayne, Pa.

May 7-10—**North Carolina Fire College.** Annual meeting, Salisbury, N. C. Director-Conductor, Chief Charles L. Burkett, Fire Headquarters, Salisbury, N. C.

May 19—**Keystone State Fire Chiefs Association.** Spring meeting. Oakland Fire Company Station, Johnstown, Pa. For information, contact Lewis M. Atkinson, Recording Secretary, Malvern, Pa.

May 21-25—**California Fire Service Instructors Conference.** Annual meeting, Fresno, Cal. Director, T. S. Ward, Supervisor of Fire Training, State Department of Education, 721 Capitol Avenue, Sacramento 14, Cal.

May 22-25—**Iowa State Fire School.** Annual meeting, Iowa State College, Ames, Ia. Director, Keith Royer, Supervisor Firemanship Training, 110 Marston Hall, Iowa State College, Ames, Ia.

May 28-June 1—**Alabama State Fire College.** Annual meeting, University, Ala. Director, M. O. Hulsey, Assistant State Supervisor of Trade and Industrial Education, P. O. Box 1818, University, Ala.

June 3-6—**New York State Association of Fire Chiefs.** Annual meeting, Schroon Manor, Schroon Lake, N. Y. Secretary, Ward A. Bohner, Fire Headquarters, Utica 2, N. Y.

June 4-8—**National Fire Protection Association.** Annual meeting, Boston, Mass. General Manager, Percy Bugbee, 60 Batterymarch Street, Boston 10, Mass.

June 9—**Central Adirondacks Firemen's Association.** Annual meeting and drill contests with parade, Inlet, N. Y. Secretary, Floyd Simons, Wells, N. Y.

June 9-10—**Central Western Firemen's Associa-**

tion. Annual fire school, Brookville, Ohio. Chairman, W. H. Cheesman, 309 Briarcliff Road, Dayton 5, Ohio.

June 10-13—**Oregon Fire Chiefs Association.** Annual meeting, Seaside, Ore. Secretary, Chief E. L. Smith, City Hall, Salem, Ore.

June 11-14—**Illinois Fire College.** Annual meeting, University of Illinois, Urbana, Ill. For information, contact R. W. Alsip, Box 8, Champaign, Ill.

June 16-17—**Northeastern Pennsylvania Volunteer Firemen's Federation.** Annual fire school, Honesdale, Pa. Fire School Chairman, James H. Oakey, Box 67, Tobyhanna, Pa.

June 20-22—**Montana State Volunteer Firemen's Association.** Annual meeting, Butte, Mont. Convention Chairman, William R. McDonel, P. O. Box 763, Butte, Mont.

June 21-23—**Hudson Valley Volunteer Firemen's Association.** Annual meeting and parade, Lake George, N. Y. Secretary, Charles M. Fales, 92 Clove Avenue, Haverstraw, N. Y.

June 25-28—**New England Association of Fire Chiefs.** Annual meeting. The Wentworth, Portsmouth, N. H. Secretary-Treasurer, John O'Hearn, 206 Mt. Auburn Street, Watertown 72, Mass.

June 27—**General Western Firemen's Association.** Annual meeting, Germantown, Ohio. Secretary, Roger C. O'Donnell, Covington, Ohio.

June 28-30—**International Fire Buff Associates.** Annual meeting, Newark, N. J. For information contact the host association, The Bell and Siren Club, Inc., William E. Conradi, Secretary, 86 Wakeman Avenue, Newark 4, N. J.

June 28-30—**Southern New York Volunteer Firemen's Association.** Annual meeting, drill contests and parade, Islip, N. Y. Secretary, Ernest Stoll, Snedecor Avenue, Bayport, N. Y.

June 28-30—**Northern Central New York Volunteer Firemen's Association.** Annual meeting, Manchester, N. Y. Secretary, Samuel J. Pitcher, 35 Dayton Street, Rochester 21, N. Y.

July 12-14—**Central New York Firemen's Association.** Annual meeting, drill contests and parade, Oneonta, N. Y. Secretary, George W. Lang, 10 Ellwood Avenue, Cortland, N. Y.

July 20-21—**Hudson-Mohawk Volunteer Firemen's Association.** Annual meeting, drill contests and parade, Rensselaer, N. Y. Secretary, Harold A. Gass, 3058 Albany Street, Schenectady 4, N. Y.

July 21—**Central North Shore Volunteer Firemen's Association.** Annual invitation drill and parade, Central Islip, N. Y. For information, contact Captain John S. Brewer, 96 Carleton Avenue, Central Islip, N. Y.

July 23-25—**Western New York Volunteer Firemen's Association.** Annual meeting, emergency first aid tournament, drill contests and parade, Batavia, N. Y. General Convention Chairman, Fred G. Wolf, P. O. Box 130, Batavia, N. Y.

July 27-28—**New York-Penn Firemen's Association.** Annual meeting, Horseheads, N. Y. General Chairman, Chief George Sullivan, Horseheads, N. Y.

Aug. 1-3—**Southwestern Association of Volunteer Firemen.** Annual meeting and parade, Gowanda, N. Y. Secretary, Samuel J. Beckman, Versailles Road, R. F. D. No. 1, Lakeview, N. Y.

Sept. 4-7—**Maryland Short Course for Firemen.** Annual meeting, University of Maryland, College Park, Md. Director, Robert C. Byrus, Director of Fire Service Extension, Box 85, University of Maryland, College Park, Md.

Sept. 17-20—**International Municipal Signal Association.** Annual meeting, Denver, Colo. Secretary, Irvin Shulsinger, 130 West 42nd Street, New York 36, N. Y.

Sept. 20-22—**Westchester County Volunteer Firemen's Association.** Annual meeting and parade, North Tarrytown, N. Y. Secretary, John R. Bailey, Box 1, Baldwin Place, N. Y.

Oct. 4-6—**Ohio Fire Chiefs' Association.** Annual meeting, Hamilton, Ohio. General Chairman, Chief George Schlotterbeck, Fire Headquarters, Hamilton, Ohio.

Oct. 23-25—**Illinois Firemen's Association.** Annual meeting, Springfield, Ill. Secretary, Roy W. Alsip, Box 8, Champaign, Ill.

Nov. 12-16—**International Association of Fire Chiefs.** Annual meeting, Miami, Fla. Secretary-Manager, B. Richter Townsend, Hotel Martinique, Broadway at 32nd Street, New York 1, N. Y.

Insist on the BEST

Specify

BOMGARDNER

Stretcher Equipment Leaders Since 1898

Mid-Century Ambulance Cot

Most popular of all cots manufactured for ambulance work

Fold-a-Cot

Unique folding type of emergency stretcher

All types of cots and stretchers available for station wagon use. Write today for information or see your dealer.

THE BOMGARDNER MFG. CO.

P. O. 567, Edgewater Branch **Cleveland 6, Ohio**

the round table

discussion of current fire department and fire management problems

Closed or Open Fire Apparatus

THIS IS THE THIRD installment of the Round Table on closed vs. open fire apparatus.

The generous response from our readers makes it necessary to carry the discussion over to this issue and to the April issue as well. The editors will welcome any additional comments on the subject. Address replies to Round Table Editor, FIRE ENGINEERING, 305 East 45th Street, New York 17, N. Y.

Discussion of the Subject

J. F. Finnegan, Chief, Richmond, Va.: We have no cab equipped apparatus. In January of 1953, we had a man killed by being thrown from the front seat of one of our pieces of equipment. This would have been prevented had the apparatus been equipped with a cab.

O. E. Boegess, Chief, Charleston, W. Va.: Due to our hilly terrain, we eliminate as much bulk as possible. All our fire equipment is of the open cab type. Men do not ride on side running board, but on rear step.

James P. Warwick, Chief, Knoxville, Tenn.: The enclosed cab type of apparatus for chauffeurs and members definitely reduced the number of injuries of personnel. We not only have had less major accidents, but less minor ones such as sprained ankles from men getting off apparatus before it stops.

Sick leaves are more frequent on open type apparatus than on closed types.

We have noticed no perceptible difference in number of accidents between open and closed cab apparatus.

The open type is slightly better for visibility in spotting hydrant; also in backing up apparatus.

Hugh F. Lyon, Chief, St. Louis, Mo.: Our jobs are mostly semi-cab, the few cabs we have being located in districts of little running, making it difficult to compare the two types.

We have no way of making a comparison of the frequency of injury between the two types, but it would appear riding inside would be safer.

Reynold C. Malmquist, Chief, Minneapolis, Minn.: The only cab pumpers we

THIS MONTH'S QUESTIONS

What do your records show regarding accidents and resultant injuries to personnel on fire department apparatus equipped with (a) enclosed cab for chauffeurs and members as against (b) enclosed cab for chauffer and officer only?

Is personnel injury frequency greater when members ride the side running board or rear step (than when inside cab or body of apparatus)?

Have you noticed any difference in sick leaves between men who ride open apparatus and those who ride units provided with cabs?

How do closed cab apparatus compare with open apparatus from the standpoint of accident frequency?

Have you noticed any difference in (a) accidents and (b) operational difficulties such as visibility, spotting, etc., between cab-over-engine and other types?

INDUSTRIAL RADIO

2-WAY RADIO

Smaller, Lighter, More Powerful Equipment for all Fire Department Radio Communications

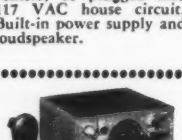
Actual demonstrations prove that pound-for-pound and size-for-size, PAK-FONES offer more reliable communications than other equipment made for fire department use. Many village radio systems are composed entirely of PAK-FONES. This superior performance is the result of the latest Heimark design and efficient circuits.

UNIVERSAL PORTABLE UNIT

The Model A PAK-FONE has self-contained batteries, may be operated from a storage battery in a vehicle, or plugged into 117 VAC house circuit. Built-in power supply and loudspeaker.

FOR THE CHIEF

A personal 2-way radio, no larger than a camera. With it, the chief can direct operations from within a burning building. Unit is protected by a heavy leather case. Waterproof handset. FIELD-FONE Model FF.



Vehicle and Base Station PAK-FONE

The Model J is the smallest complete 2-way radio for vehicle or base station use. It measures only 10" W x 9" D x 5" H. Operates from 6, 12, 24 volt systems and 117 volts A.C. Built-in loudspeaker and power supply. Minimum installation. Can be removed from vehicle in less than 1 minute.

WRITE FOR COMPLETE INFORMATION AND LITERATURE

ir INDUSTRIAL RADIO CORP. 428 N. Parkside Ave. Chicago 44, Ill.

have are those which house the men, the driver and officer.

Since we have purchased the six cab jobs, we have not had any injuries due to accidents on that particular type of equipment. However, we have had several men hurt riding the footboards on other pumpers because of accidents.

So far we have not been able to determine whether it has had any effect on cutting down sickness or not. I firmly believe the cab jobs will eventually show we have less sickness with the men who are protected in the cabs than in the open jobs.

We have found no difference in accidents and operational difficulties between the cab-over-engine and other types.

Allie A. Feldman, Chief, Denver, Colo.: It has been only in recent years that we have purchased cabs for our apparatus. This has been for all districts within the city except in the downtown high value area where the runs are short and visibility is a major factor. In the other areas where the runs are longer, we feel that visibility is not of great importance and the men can be delivered to the scene of the fire in good condition, especially during the winter months.

We have not, as yet, noticed any difference in accident frequency to personnel between the apparatus with cab and without, nor have be had any comments from the men as to visibility and spotting between cab-over-engine and other types.

Nick Palla, Jr., Chief, East Chicago, Ill.: We have had no record of accident with open or closed cabs.

We feel that the enclosed cab gives the men more protection, and more important, when returning to the station after a fire call, the men are better protected in the closed cab.

F. E. Saefke, Chief, Fargo, N. D.: We do not have closed cabs on our apparatus.

We do have a cab on our ladder service truck which seems to work out very well, and I believe that if we purchase new apparatus, they will be equipped with cabs because of our cold and stormy weather conditions.

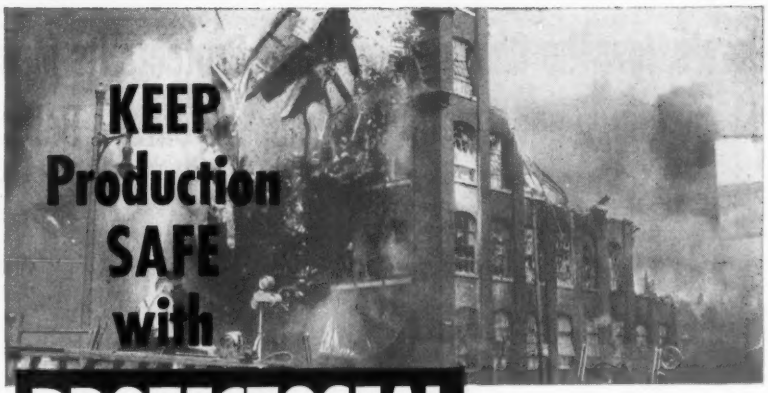
J. V. Brown, Chief, Roanoke, Va.: Roanoke has not had an accident involving personnel injury with any fire apparatus with closed cab. Our first closed cab was purchased in 1940, and since then all apparatus bought by the fire department is of that type.

Our accidents were caused by the added width of modern fire apparatus. Visibility is somewhat limited when backing or spotting fires.

Thomas M. Lane, Chief, Alameda, Cal.: As we do not have an enclosed cab for chauffeurs and members, we have not had any experience with accidents to this type of apparatus.

We have two units of apparatus with a cab in which the chauffeur and officer ride, but the other firemen ride on the rear step. We have had no accidents with these units.

With the exception of one accident involving one of our firemen who was standing up while the apparatus was making a left turn, none has been in-



PROTECTOSEAL APPROVED

Safety Production Equipment

A PLUNGER CANS

Insure plant and operator safety in all cleaning, sponging and swabbing operations. When plunger is depressed a measured amount of the volatile and flammable fluid rises into the dasher to moisten the swab. Excess liquid flows back into the can and is not left on surface to evaporate or be ignited. Dasher containing fire baffle is self-extinguishing. Five sizes from 1 pt. to 2 gal.

B SAFETY CANS

For general use wherever flammables are employed within the plant. Fire prevention baffle is a double concentric cylinder inside base of spout. Spring-loaded cap automatically makes tight closure. Squeeze-grip handle; positive control while pouring.

C BENCH CANS

Reduce waste, speed production and give positive protection against fire and explosion. The spring mounted perforated metal dasher which also acts as the fire baffle covers the liquid surface and minimizes evaporation losses. A size to meet every requirement.

D OILY WASTE CANS

A necessity in every plant for the safe placement of oily or solvent-soaked rags and other waste material. Required by many insurance companies. Full length cover opens wide by slight foot pressure at any point on full width treadle.

THE PROTECTOSEAL COMPANY
1946 S. WESTERN AVE., CHICAGO 8, ILL.
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CLIP COUPON, fill in, attach to company letterhead and mail for Complete Catalog and Price List.

THE PROTECTOSEAL COMPANY
1946 S. Western Ave., Chicago 8
Please send complete Catalog of Factory Safety Production Equipment with Price List.

We are especially interested in_____
Name_____
Title_____
Address_____
City_____ Zone_____ State_____

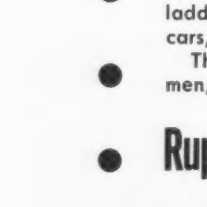
Here's How The Chicago Fire Dept. Protects Its Men From Injury and Death With Rupert Safety Belts

A tillerman of Chicago Fire House #6, wearing a Rupert Heavy Duty Belt.

The Chicago Fire Department is now in the process of installing 1,400 Rupert Safety Belts in the tiller seats of all hook and ladders, and in the cabs of squad cars, ambulances, chief's cars, and the commissioner's car.

This move was made to reduce the risk of accidents to tillermen, cab men, and other personnel while proceeding to fires.

Rupert Safety Belts Safeguard Your Force



No matter how wild the ride, your men stay safe in their seats when they wear Rupert Safety Belts. When fast action is called for, Rupert Belts release instantly. We recommend two models:

- For tillermen—Rupert's Heavy Duty Belt (left), the strongest belt made! Resists a pull of seven tons!
- For cab men and men in automobiles—

Ruperts Auto Safety Belt (right), with 3,600 pound tensile strength.

All Rupert Belts are heavy Nylon,—many times stronger than necessary. All are equipped with quick release buckles. They are comfortable, won't hamper movement, and actually reduce fatigue.

Rupert Safety Belts will protect your force from unnecessary injury and death. Write for complete information and price list.

Rupert
PARACHUTE CO.
WHEELING, ILL.

jured during the last twenty-three years while I have been chief.

There has been no difference in sick leaves nor in accident frequency.

In inclement weather such as heavy rain, fog, condensation, snow or other similar weather conditions, unless the side and rear windows as well as the windshield are equipped with wipers or the windows are lowered, they are difficult to see through. Sometimes the chauffeurs in spotting the hydrant for a hook up attempts to back up the apparatus, and unless proper safety precautions are observed, it is possible that he may back into the firemen at the rear of apparatus and injure them.

D. Zuidmulder, Chief, Green Bay, Wis.: We find that our accidents have been minor with the closed cab. One disadvantage that we find comes when backing the rig into close quarters. We find spotting is just as easy as with an open truck.

The incidence of sick leave seems to be about the same with men riding both types of rigs.

One nice thing about a closed cab is that if you have any distance to travel to or from a fire, it helps to keep your men warm. If the distance is short, my men always ride the tail end. Another advantage for the closed cab is that all freezable extinguishers can be kept inside and can be ready for immediate use.

Walter G. Strickfaden, Chief, Columbus, Ohio: All fire apparatus in the Columbus Fire Department is of the canopy cab type so we are unable to compare accidents and injury.

However, we find that when apparatus is involved in accident, the personnel on the equipment are merely shaken and not seriously injured. We did have one accident resulting in the death of a fireman, but he was still on the catwalk when the apparatus and a transportation bus collided. The men who were in the cab escaped injury, but were shaken up.

We have noticed a difference in sick leaves between men who ride open apparatus and those who ride inside cabs.

We have noticed a decided improvement in accidents and operational difficulties since converting to the canopy-type of equipment.

Our cabs are so constructed that visibility is much better. Then men are protected from the weather and can see where they are going at all times. There is no danger of being blinded by dust, wind, snow, sleet or rain.

Ernest W. Byrne, Chief, University City, Mo.: Our department has both closed type cab for the driver and officer and the closed type cab for driver, officer and personnel. We have two standby engines that are of the open type cab. Our records show that we had only one injury to personnel on apparatus, and that was on the two man cab type. This happened when the man was getting on apparatus and bumped his knee on door.

We have found that personnel injuries on apparatus have been practically eliminated since all personnel ride inside. This can be readily understood, because it eliminates the hazard of men riding on

the side or rear step of apparatus. It is a well known fact that men are thrown from the apparatus by quick sudden starts, unexpected turns, sudden stops and accidents. With all men inside the cab, this hazard is eliminated.

Sick leave, due to colds, has been reduced at least 90 per cent during the past three years, and I attribute this to the closed cab. I find that the men work much better when they are dry and warm. Also, after a fire they are usually wet and cold, and with the closed cab type, they have a warm place to ride for the return trip to the fire station.

We have not had one single moving accident since we placed the closed cab type apparatus in service three years ago. I feel that if a driver is properly trained, the closed cab is not a handicap.

It is my feeling that the fire service has not progressed in the apparatus field as it should. I have talked to some fire chiefs who feel that the open cab is better for the fire service than the closed type, but I have yet to find one who can convince me. If I have my way, the next apparatus we get will be all enclosed—hose wagons, ladder trucks and miscellaneous equipment.

I have always felt that the men deserve as much protection as can be provided for them. If open type apparatus is better for the fire service, why is it that all chief officers we see today ride in closed cars?

J. P. Newark, Chief, Grand Forks, N. D.: We have not had any accidents with any type of our apparatus, so we cannot speak from experience. However, we do feel that the driver and officer in charge are more alert when protected by a cab, especially when the temperature gets to around 30 degrees below with a side wind blowing.

William J. Cook, Chief, Shreveport, La.: We only have two pieces of equipment with enclosed cabs, and we have been very fortunate in not having any accidents with this equipment.

Our personnel is not permitted to ride the side running boards, only rear step and inside body of apparatus.

H. C. Fisk, Chief, Tacoma, Wash.: All apparatus on the Tacoma Fire Department are of the semi-cab type, that is, cab for driver and officer. On return from fires, one tail man is allowed to ride in the cab with the driver and officer, while the other tail man watches rolled up hose on tail board, if used at a fire.

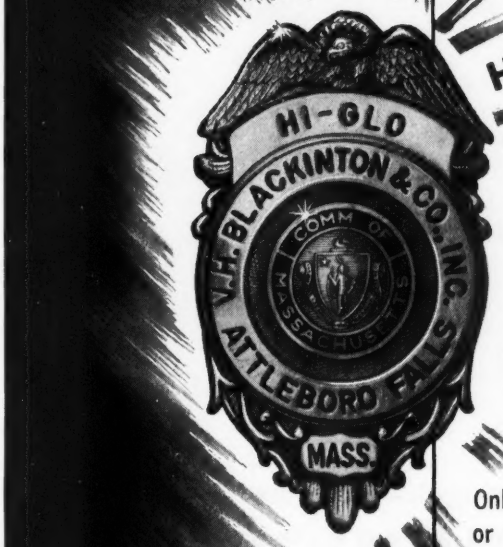
We have been very lucky in that we have had only one man hurt his foot when getting off the tail board.

We have a lot of rainy weather in the Northwest and sometimes it is bad riding the tail board, but the thick canvas hose bed cover is made long enough to pull up as a sort of wind break and cover from rain. Our sick leave loss of time is below other departments in the city.

In the past two years we have had only two accidents in the fire serivce; prior to this we had a fire rig hit a logging truck, which was serious.

We have no cab-over-engine apparatus in our department. The men on the tail board have a buzzer button that they use if officer and driver fail to see fire. □□

YOU CAN POLISH THIS BADGE FOR A.. Lifetime



HERE IT IS THE NEW BLACKINTON HI-GLO BADGE

Only a Solid Gold Badge or a HI-GLO Badge will last a lifetime.

THIS BADGE WILL MAKE YOU THINK TWICE — BEFORE ORDERING ORDINARY GOLD BADGES . . . . WHY?

. . . because this new HI-GLO Badge is different. It is made from an entirely new material — a rich looking golden metal that is solid gold color throughout. That's why you can polish a HI-GLO badge for a lifetime. Every HI-GLO badge will have deluxe enamel lettering and a ruby colored stone (optional at extra charge) set in the eye of the eagle. You can see, the new HI-GLO badges will be something special, a distinctive badge for those who want the very finest gold color badge.

Your Blackinton equipment supplier has samples of the new HI-GLO badge. Ask him for more information.

BLACKINTON
V. H. BLACKINTON & CO., INC.
ATTLEBORO FALLS, MASSACHUSETTS

New!

IDEAL SURVEY METER FOR RADIATION SAFETY

- **Compact, convenient, accurate**
- **Operates on a single flashlight cell**
- **Weighs only 2 pounds**
- **Beta or gamma by twist of a knob**
- **Two ranges: 0-25 mr/hr, 0-1 r/hr**
- **Accessories to multiply or divide both ranges by 10**

Curtiss-Wright

RADIAMETER

The Curtiss-Wright Radiameter is a radiation survey meter designed especially for health physics and industrial hygiene applications. Using a unique inverted triode circuit, it performs functions usually requiring two instruments. The lower scale provides high sensitivity for decontamination monitoring. The high scale measures stronger radiation fields usually requiring an ionization chamber type instrument.

Where other radiation survey meters require several expensive and hard-to-find batteries, the Radiameter is powered by a single inexpensive flashlight cell. It is easy to handle and slips readily into a suit coat pocket.

Having the appearance of a light meter or camera, it attracts minimum attention from plant personnel during safety checks. The one-piece cast aluminum case is light in weight, but extremely rugged and waterproof. The Geiger tube or battery may be changed in seconds and without tools. Controls are simple, even for non-technical personnel, and the meter is easy to read.

Accuracy is ±10% of full scale on both scales for energies from 50 to 1,200 kev. The Radiameter is useful for monitoring energies as low as 15 kev. In the presence of radiation of high intensity, the instrument does not overload but continues to read off-scale. It can be zeroed even in a strong field. Its fast response permits monitoring x-ray installations turned on only momentarily. Battery life is long—approximately 140 hours.

Available accessories include a probe to multiply sensitivity by 10, a tube to divide sensitivity by 10, an alpha tube, a radium calibration source, a push-button on-off switch, and an attractive leather carrying case. Write for details.

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CURTISS-WRIGHT
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World-Wide Fire News

Kirk Calls For Unified National C. D. Plan

The new head of New York State's Civilian Defense Commission, Adm. Alan G. Kirk, has called for a unified plan to protect civilians against surprise enemy attack.

Claiming the Federal Government lags far behind most states in civil defense preparatory planning, Adm. Kirk, who commanded the U. S. Naval Task Force in the Normandy invasion, said that in case of enemy attack we cannot have 48 different civilian defense plans.

"We must make up our minds what is going to be done if we are heavily bombed in a surprise attack. . . . We must decide who is going to give the green light for evacuation before the attack", he said.

Name Please!

The Federal Civil Defense Administration is shopping for a new name.

Seems that the old one gives most persons wrong ideas; according to defense officials FCDA smacks too much of images of war, bomb shelters, radioactive fallout and things like that.

What is wanted, according to Val Peterson, Administrator of FCDA, is a monicker that will emphasize the "disciplined aid the agency can offer in peacetime disaster."

Mr. Peterson, they say, has toyed with the name of "Federal Disaster Administration".

Other hands suggested include "Civilian Emergency Administration", and "National Disaster Administration".

A change in title is not imminent since Congress must approve it, but rumor has it such a bill will be introduced during the present session.

A name such as "Federal Disaster Administration," the proponents opine, will cause the public to associate its work with the "speedy but disciplined" relief measures it can take in disasters like hurricanes and floods.

From the World News Ticker

A fuel tank from an Air Force F-100 C jet fighter dropped into a Columbus, Ohio, backyard January 23, last, and exploded. The blast tore a 12-foot crater. No one was injured and no serious fire occurred. The jet landed safely. . . .Explosion of a small fire-works plant off Rt. 46 in Caldwell Twp., N. J., on January 29, rocked western Essex County. No one was injured but three of six small buildings at the plant were destroyed. The owner said he was burning grass when somehow the explosion occurred. . . . The 25-man crew of the British freighter Herriesburn were rescued by a Danish tanker, January 22, when fire swept through their ship and forced the

crewmen to leap into heavy seas. The burning vessel sank. . . . One American soldier was killed and another injured when several buildings burned at an Army establishment in Pusan, Korea, the night of January 26. . . . The chief of the Cologne area bomb disposal squad and three of his assistants were killed, January 23, when a British bomb exploded while they were trying to defuse it. The 36-year-old squad leader had defused thousands of World War II bombs and shells. . . . A firecracker plant at Taipei, Formosa, exploded January 24, killing the owner, a young woman employee and the owner's 4-year-old son. . . . Fire on January 30 destroyed nearly one-fourth of Sweden's biggest oil refinery at Nynashamn, 25 miles south of Stockholm. Sabotage was suspected. Damage was estimated in the millions of dollars. . . . Two men working at an island lighthouse in the St. Lawrence River about 60 miles east of Quebec, were rescued by a passing schooner as fire ravaged the keeper's living quarters and an adjoining shed. . . . Four women and four children were killed January 7 when a pilotless Italian Vampire jet fighter crashed into a farm cottage near Naples, Italy. At least ten other persons were injured. The cottage was demolished. . . . A board of inquiry was called January 23 to investigate a $600,000 fire that swept Minto Armories, an army training school, and took the life of Winnepeg Canada's third-ranking fireman. The caretaker and his wife were rescued by firemen from the roof of the turreted brick block-long building as flames roared through it before dawn on January 22 with the thermometer at 22 below zero. Battalion Chief Andre Hebenton, 64, was overcome by smoke and died.

Integration Begins in Los Angeles Fire Dept.

Chief Engineer William L. Miller of the Los Angeles Fire Department has begun what he terms "an experimental" trial of a new integration policy for the department.

Chief Miller transferred eight Negroes from the two all-colored stations to Engine 7 at 29th and Main Street, a combination White-Negro neighborhood. Simultaneously, Chief Miller transferred eight white firemen, who said they had no objection to working with Negroes, into the same house. The changes constitute a complete changeover of personnel at the station.

This is latest move in the long and bitter integration battle reported in previous issues of FIRE ENGINEERING.

Chief Miller said he made the transfers because "I thought it should be done . . . Period."

In a prepared statement, Chief Miller said:

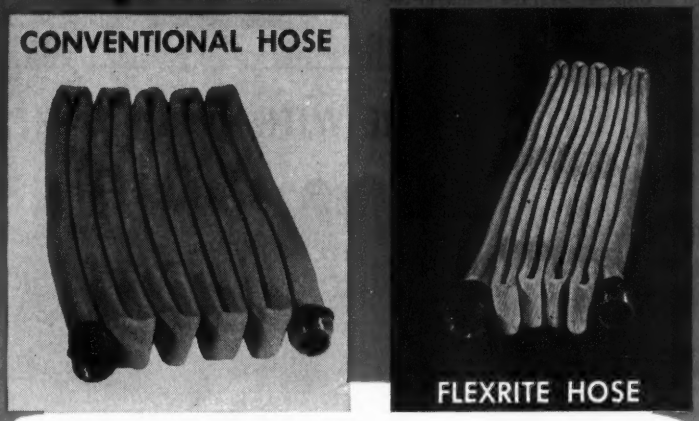
"These transfers constitute my initial action in line with the policy of gradual integration authorized by the Board of Fire Commissioners."

Paul C. Ditzel

More FLEXIBLE COMPACT DURABLE Than

NOW with SEALCOTT "W" . . . Hamilton's new effective fire hose protection against destructive mildew and rot.

HAMILTON Flexrite FIRE HOSE

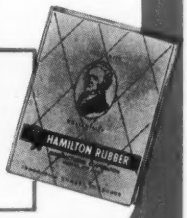


Flexrite, made with Dacron* chemically-produced polyester fiber filler cords, folds tighter, rolls closer and is 20% lighter.

*DuPont trademark

A reputation for integrity such as ours is not easily gained. Since 1870, our customers have continuously praised the reliability of our products . . . a reliability which has been attained only by obtaining quality from our Technical and Manufacturing departments at all times.

Write for the new 1956 catalog on our complete line of fire fighting hose for every municipal, industrial and forestry requirement.



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THE WATCH DESK

overhauling the firemanic news of the day

Flute for Fire? Piccolo for Police?

When you hear the musical note it means fire—or police!

That's what we may be coming to, according to reports from the Bell Telephone Laboratories released last month.

Electronic experiments are being conducted to dispense with the jangle of the telephone and in its place substitute dulcet musical notes, much like those of oboe or clarinet.

The new sound is said to stand out better above general room noises and to be more easily distinguished from doorbells, alarm clocks and fire alarms.

The device will have a range above middle C to two C's above middle C, slightly more than an octave—in case you know your octaves. The signal on each phone will be a single note.

Deponent saith not whether "tones" will indicate the nature of the call. We can visualize at fire alarm headquarters a piercing piccolo-like signal indicating police, or a fluctuating flute-like tonal signal signifying *Fire!*

Signalmen will now bone up on their phone-etics!

That's Right!—Firemen Rescue Cot from Tree

Chalk up another daffydilly for the kinkchasers.

In St. Louis, Mo., recently, the Brothers were called out to rescue a cot from a tree. And by "cot" we don't mean to imply our compositors pulled a typo' bull.

Ladder Company 19 of the St. Louis Fire Department was special called to the nurses' home, 4961 Audubon Avenue the other day, after it was discovered that a cot, kept on the roof of the four-story residence for summer sunbathers, had flown the coop urged by a heavy wind, and had come to roost in the upper branches of a tree.

Height of the tree, 35 feet, and labyrinth of branches made rescue of the cot by anybody but fire fighters impossible—or so it was believed by those who yelled for the firemen.

As the nurses and visiting rubbernecks cheered, a fireman leisurely mounted the aerial ladder, extricated the wandering cot from the tree's clutches, and negotiated it earthward.

Clipper W. A. McDonnell, who spotted this news item, queries: "What if there'd been a sunbather in that there cot? It might have taken a full four-alarm assignment!"

Too Big a Bonfire, Says Clough

George Clough, Nassau County, N. Y., Fire Marshal, ordered a crackdown Oct. 28, last, on all Long Island home builders who burn abandoned buildings on land they plan to develop.

To make his point good, Clough ordered the arrest of a 34-year old construction foreman for a development firm, after Nassau's "biggest bonfire" leveled a 27-room frame house in Westbury early on the 28th.

The foreman was charged with violating a county ordinance prohibiting the setting of industrial fires without a permit and was fined $25 after pleading guilty.

"Too many builders are using this inexpensive but dangerous method to clear development parcels instead of having wrecking crews tear down the old houses," declared the Marshal.

The burned house, the Marshal said, was only a block from a new public school and sparks could have caused damage there.

Kinkchaser comes up with the old wheeze, why don't they let the vamps burn them down, and get a bit of fire extinguishing practice in the doing?

Look Ma—No Tiller!

The fellow who wrote the recent hit tune, "Somebody Bad Stole De Wedding Bell," can feel a bit sorry for the Boston Fire Department.

CHECK and COMPARE WITH OTHER MAKES

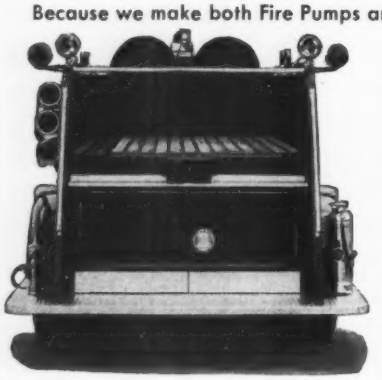
A Recent Delivery to WESTFORD, N. Y.

ALL CHAMPIONS ARE BUILT TO THE SAME HIGH STANDARDS OF ENGINEERING

When you and the other officials of your town purchase a Darley Champion Fire Apparatus you are giving your community the best fire protection money can buy, and your taxpayers will like the savings.

Because we make both Fire Pumps and Fire Apparatus, we can and do give you everything of the best and save you money too.

When buying Fire Apparatus for your community, check and compare the Darley Champion with any other make. We welcome your comparisons first, and then our low quotation will surprise and please you even more.



Carries its own water supply (500 gallons) and 1400 feet of fire hose.

For example, the Champion shown above, a 750 Gallon Pumper with High Pressure Fog performance, may fit your budget much easier than you think.

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W. S. DARLEY & CO., CHICAGO 12

AT YOUR SERVICE: Sales and Service Representatives — East, Midwest, North, South

While fire fighters in that city were battling a night club blaze on January 6 in the theatrical district, someone up and stole one of their big ladder trucks.

The thief abandoned the ladder truck a few minutes later when it crashed against a fence at the Boston Common. The man learned he couldn't make a full swing around the corner of Tremont and Boylston Streets without a tillerman at the rear end!

Meanwhile, the blaze caused $40,000 damage to the Stage Bar. District Chief Flanagan who estimated the damage, said the blaze was caused by a carelessly discarded cigarette.—*Tom Magner*

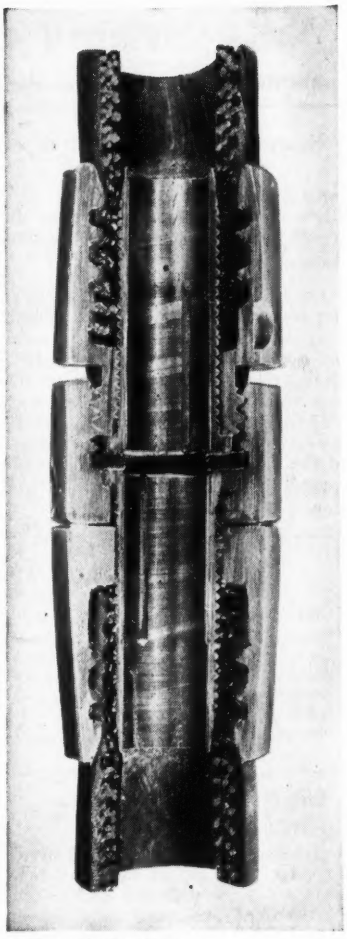
Hot Off the Tape

In Houston, Tex., postman Thomas Autzen made two "special deliveries" on January 30 that were above the call to regular duty. Spotting a burning duplex on his route, Mr. Autzen, 41, entered the flaming building to rescue two children. Orchids to this postman! . . . Over 300 show pigeons worth $4,500 were killed in a 3-alarm blaze that involved two top floors of a 6-story loft building in Manhattan January 26. . . . Speaking of birds, Passaic, N. J., firemen got the bird, a live one too, just two days later. While battling a fire that swept a three-story row of stores, offices and apartments, a crew fought its way into one smoke-filled apartment and were startled to hear a voice quite unperturbed, call out: *"Hello There!"* The casual greeter was a parakeet, one of eight rescued by the smoke-eaters. . . . The freighter Gulf Banker, which had a two-hour cargo fire last Christmas, is undergoing survey at Mobile, Ala. The fire aboard the ship, laden with nitrate of soda, posed the danger of an explosion at the docks where the vessel was moored. . . . Post-Christmas report: Fire fighters in Easthampton, Mass., (10,000 pop.) reported only three alarms on Christmas Day. All were sounded for turkeys burning in ovens. . . . When an explosion knocked out the electrical system at Omaha's Methodist Hospital, January 17, a surgeon completed a major operation under what may be termed "battlefield conditions," using flashlights and emergency lights rushed in by the Omaha Fire Department.

INDEX FOR 1955

The Index covering the twelve issues of FIRE ENGINEERING for 1955 (Volume 108) will be available to those requesting it.

This compilation of editorial material of importance published during the past year has been prepared primarily as an aid to our many readers who maintain a file of past issues. Your copy will be mailed free upon request.



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1. **SAFETY**—The coupling becomes the *strongest part of the hose line.* Tested to 3000 pounds pressure and 500 pounds pull.
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Gentlemen: We are interested in the purchase of the new 16mm. fire training film, "CARE & MAINTENANCE OF FIRE HOSE." Black-and-white, sound, 21 minutes. Prints $100.00 ea., incl. reel, can and protective vacumating. We understand that the film is approved for the Matching Funds Program of the FCDA for its value in Civil Defense.

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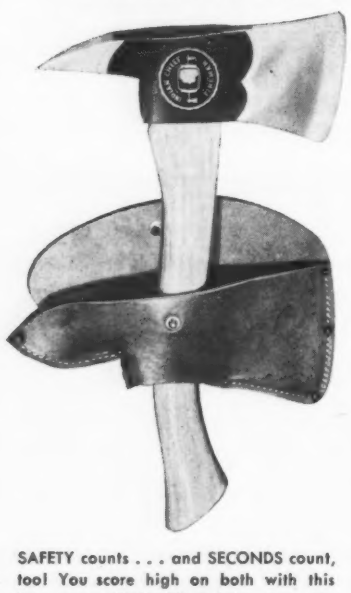

SAFETY counts . . . and SECONDS count, too! You score high on both with this fast-acting, SNAP-ON fighting tool. On the top of a ladder . . . or for close-up work, you'll welcome the extra usefulness of your "Little Fireman"—a rugged, MANN-made fire axe. The 15-inch hickory handle, precision-balanced in its 1½ lb. head, makes it a power-pack of "fightin' fury" at the side of a modern fireman. Be sure YOU carry a "Little Fireman"!

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PHONE, WIRE or WRITE for illustrated catalog sheet showing you the complete line of fire axes —all made in our century-old tradition by *fifth-generation craftsmen!*

Questions and Answers

wherein are answered questions relating to current problems in the fire protection

Hours of Pumping Per Year of Fire Engines

To the Editor:

How many hours per year does the average fire engine operate in pumping water?

F. E. O.

Answer: Figures of a typical group of cities are given below for a typical year. Those reported by Los Angeles are the most detailed, for the time each individual pumper was in operation, pumping water at a fire, was provided for each of 87 different engine companies. Some cities gave only the number of pumpers and the total hours they pumped, while others gave the average time of all pumpers.

City	*No. of Pumpers included in Tabulation*	*Total Hrs. Pumped in 1 Yr.*	*Av. Hrs. Per Yr. Per Pumper*
Minneapolis, Minn.	21	1281	61 hrs.
Los Angeles, Calif.	87	2819	32 hrs. 24 min.
Wichita, Kans.	13	109 hrs. 30 min.	8 hrs. 26 min.
Cedar Rapids, Ia.	7	129	18 hrs. 30 min.
Sacramento, Calif.	9	173	19 hrs. 14 min.
Lansing, Mich.	11	289	26 hrs. 16 min.

Two Pumpers at One Hydrant

To the Editor:

In reading the standard grading schedule, I happened upon the following statement: "A hydrant with two steamer connections may be counted as a hydrant and one half." This raised a question in my mind as to whether it would be possible to hook two 750 g.p.m. pumpers to a hydrant with a single steamer connection.

We found it possible to do with standard equipment, if one of the pumpers had 4½-inch National standard suction and if the pumper were placed at the hydrant with 10 feet of hard suction. The pumper, irrespective of suction size, could take suction from the opposite suction port of the first pumper.

We made this hookup to an eight-inch, well gridironed main and came up with the following: With only the first pumper pumping we were discharging 1200 g.p.m. at150 pounds, with an r.p.m. of approximately 1700. Residual pressure was 65 pounds. Then we put into operation a second pumper and brought the discharge to 1100 g.p.m. at 140 pounds, still maintaining our discharge of 1200 g.p.m. at 150 pounds discharge pressure at the first pumper by increasing the r.p.m.'s. Our compound gauges on both pumpers fluctuated erratically in the neighborhood of zero.

J. R. H.

Answer: If the hydrant can supply the two pumpers, there is no reason why the layout you suggest wouldn't work. This system of connecting pumpers is not entirely new. A number of midwestern fire departments employ it.

High friction loss where the engines are supplied through a single hydrant outlet and single suction may result in a partial vacuum at the pumper inlet, especially where pressure in the mains is low.

Using separate suction hose for each pumper, and taking water from two hydrant outlets instead of one, reduces the likelihood of a vacuum being pulled.

Branched Lines

To the Editor:

A 750-foot line of 2½-inch hose is branched into two 100-foot lines of 1½-inch hose each equipped with a ⅝-inch nozzle. Nozzle pressure is 50 pounds. What is the engine pressure? How is fric-

Answer: This problem may be worked in two ways: First, reduce the layout to a single line of 2½-inch hose and combine the two nozzles, and then solve as a single line with a single nozzle.

Second: Use the friction loss formula for determining the drop in pressure from the wye connection to the nozzle and determine the friction loss from the engine to the wye connection. Add the friction loss in the line of 2½-inch hose to the friction loss in either of the branched lines, and add the nozzle pressure, which will give the engine pressure.

The second method, which is the more accurate of the two will be employed first.

Discharge from a ⅝-inch nozzle at 50 pounds pressure is found by the following formula:

Discharge $= 29.7 \times d^2 \times \sqrt{P}$

"d" is the nozzle diameter and "P," the pressure in pounds per square inch.

Discharge is then equal to

$29.7 \times .625 \times .625 \times 7.07 = 82$ gallons per minute

Calculate the friction loss in 1½-inch hose carrying 82 gallons per minute. We do this as follows:

First change the 1½-inch hose to 2½-inch by dividing by the factor .074.

$100 \div .074 = 1351$ feet of 2½-inch hose

Next find the friction loss in 1351 feet of 2½-inch hose carrying 82 gallons per minute.

Friction loss $= 2Q \times Q + \frac{1}{2}Q$, where Q is the flow in hundreds of gallons per minute.

F. L. $= 2 \times .82 \times .82 + .41$
$= 1.7548$

Friction loss in 1351 feet will be 13.51 ×1.7548=23.71 pounds.

Then the pressure at the wye connection will be the nozzle pressure plus the friction loss, or 23.7+50, or 73.7 pounds.

Next find the pressure drop in the 750-foot line of 2½-inch hose.

The flow through the 2½-inch line will be equal to the sum of the flows through the two branched lines, or 2×82=164 gallons per minute.

The friction loss in 100 feet of 2½-inch hose carrying 164 gallons per minute is as follows:

F. L.=2×1.64×1.64+1.64
=7 pounds approximately

The friction loss in 750 feet is equal to 7.5×7, or 52.5 pounds.

Then the engine pressure will be equal to the nozzle pressure plus the friction loss in the entire layout, or 50+23.7+52.2=125.9 pounds.

It should be pointed out that when the flow is less than 100 gallons per minute, the formula for calculating friction loss in 100 feet of 2½-inch hose is $2\ Q^2+\frac{1}{2}Q$.

Alternate method:

The other method of solving the problem is to combine the lines and change to 2½-inch hose.

100 feet of 1½-inch hose is equal to 1351 feet of 2½-inch hose. Two parallel lines of 2½-inch hose are equal to 1351÷3.6, or 375 feet of 2½-inch hose, single line.

Add to this the 750-foot stretch of 2½-inch hose and we have a total layout of 375+750, or 1125 feet.

Two ⅝-inch nozzles are equivalent approximately to a nozzle ⅞ inches in diameter.

Then we solve for engine pressure.

Nozzle pressure is 50 pounds. K, for ⅞-inch tip on 2½-inch hose, is .068.

Engine Pressure=Nozzle Pressure×(1.1+KL)

L=1125÷50, or 22.5.

Then E. P.=50×(1.1+.068×22.5)
=50×2.53
=126.5 pounds.

Volunteers Conduct Effective F. P. Drive

The too-prevalent theory that volunteers cannot carry out effective educational fire prevention campaigns, has been disproved by the Conroe, Tex., Volunteer Fire Department, Chief P. H. Cranford.

Working through the schools, and with the aid of local service clubs and newspapers, the volunteers have registered the story of what to do in case of fire, when and if it happens, as well as what to do to prevent fires.

A full page of dramatic photographs in the local newspaper was of great assistance in the drive. These photographs illustrated such essential details as phoning an alarm; having someone out front to direct the approaching apparatus; escaping from a smoke-filled room by means of sheets; waiting for help to escape; making sure all occupants of the house are alerted; and what to do for a person whose clothes catch fire.

THEY LOOK ALIKE BUT THERE'S ONE IMPORTANT difference*

This violin cost $39.95 plus tax. It looks *exactly* like the violin shown below, but . . .

This violin — a genuine Guarnerius — would cost $2,700.00 — if you could buy one!

*The important difference, of course, is *what you want to do with the instrument*. You wouldn't give a student a Guarnerius — nor a concert artist a beginner's instrument.

THE *SAFEST* INVESTMENT IS BI-LATERAL FIRE HOSE... IT COSTS *LESS* TO BUY THE BEST!

If you want *safety* AND *savings*, one way to be *sure* is to *look at the record!*

Bi-Lateral furnishes *FREE* hose record cards — send for your supply today.

Here's a sample piece of fire hose — it looks just like the piece below — yet . . .

This fire hose is worth 10 times — maybe 1,000 times — as much!

Bi-Lateral hose is built up to a standard not *down* to a price! There's a *reason* for Bi-Lateral — it's to put out fires! It will prove to be your most *economical* purchase as well as your *safest* investment!

(Bi-Lateral *IS* cheaper *in the long run*. Hose record cards prove it! Send for yours . . . free.)

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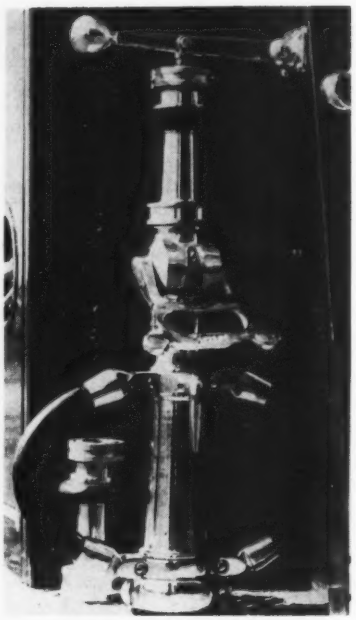


Vogt Designs Quick Release

Deputy Chief Louis Vogt of the Rochester, N. Y. Fire Department who heads up one of the best equipped and organized fire department maintenance shops in this nation, has come up with a simple, effective hose pipe release which is now standard equipment on all Rochester fire rigs.

The secret is a catch actuated by a quick release spring lever, shown in the accompanying photograph. It ends all screwing of the pipe and nozzle onto pins.

Mounting for Emergency Light

Not every state legalizes blue lights for the care of volunteers, but several do. The following idea, conceived by correspondent "Smoky" Camardella of Oswego, N. Y., for displaying volunteers' blue lights, is equally applicable for fire chiefs or other members of fire departments, whether using blue, red or any other official lights.

The diagram tells most of the story. The light, when set properly on the windshield wiper motor, will oscillate from side to side, giving a warning signal in three directions, instead of the single forward beam when the light is fastened in the customary stationary position on the front of the vehicle.

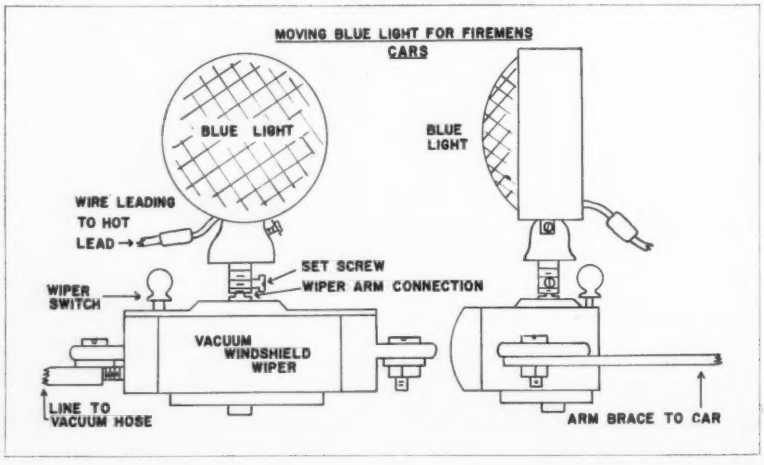
A discarded windshield wiper motor is used by our contributor who emphasizes that the motor must be in good operating condition. A bracket is made from flat band iron in order to fasten the assembly to the front of the car. A rubber vacuum hose is run from a "T" connection off the existing vacuum line of the car and fastened onto the wiper motor bearing the blue light. This does not hamper the present windshield wiper motors on the car in any way. In the event the car is equipped with electric windshield wiper motors, the vacuum line from the blue light can still be hooked up to the car's existing vacuum line.

Contrib' Camardella adds that a "blinker box" can be installed if desired, but he personally finds it is better without one.

Idea for Improving Salvage

A suggestion has come from a reader who prefers to remain anonymous, but who is following our series of articles on "Overhaul and Salvage in Theory and Practice" which we pass along for what it may be worth.

He suggests that plywood panels from radio and refrigerator (and like) shipping cases make excellent "fillers" when glass or doors are broken out. These are readily available and a few can be kept on hand for emergencies.



Among the Buffs

By Paul C. Ditzel

ARTHUR FIEDLER breezed into town the other day with his Boston Pops Orchestra and much to the surprise of the local newspapermen sent to interview him, preferred to discuss fire buffing.

As most of you know, Maestro Fiedler is one of the most famous buffs in the United States. He is the honorary fire chief in 70 United States cities. In his hometown, Mr. Fiedler's car is fitted with fire department license plates, a radio tuned to the fire frequency and a siren for beating his way through traffic.

Fiedler carries the hobby even to the point of owning a Dalmatian coach hound named Sparky. The papers almost forgot to mention the Boston Pops concert in Pasadena. All of which must have made the press agents most unhappy.

Another visitor this month was Milt Broch of Dayton, Ohio, who was here for a few weeks on a job at the Hughes Aircraft plant.

All of you are familiar with the work of Bob Patterson whose cartoons have been a happy addition to the pages of FIRE ENGINEERING for some time. Bob is a man of many talents. Those of you living in this Western part of the United States no doubt listen to his weekly Sunday night network radio show, "Central Alarm," a tape-recorded report of a big city fire department in action, namely the Los Angeles Fire Department.

Bob, who lives at 5440 Bevis Avenue, Van Nuys, Calif., tells me he'd like to hear from buffs who have ideas for cartoons. He's a whiz at the artwork but the job of being perpetually humorous sometimes wears thin. Bob wonders what ideas you might have for cartoon gags, be they firemaniacal or otherwise. Write him, you natural born humorists like Doc Levin, Tom Jewett, Max O'Brien, Hal Bruno, Al Winograd, and Les Morris, The Sage of Whittier Boulevard.

Speaking of that intrepid fire enthusiast, Doc Levin, forces me to repeat a comment made about this columnist via the columns of The Phoenix Society's "Phoenician News.":

"What happened to Paul Ditzel when a jet airplane plowed into several automobiles near Paul's house? Ditzel did not even respond. Even the Phoenix members would have attended this fire had they known about it."

I'm sure they would have, Doc, knowing their genuine zeal. Unfortunately for you, however, the Los Angeles Fire Department has a reputation for putting 'em out in a hurry, a situation which you perhaps are not accustomed to.

Next question, please.

Seriously, however, Doc and the members of the Phoenix Society can read all about the crash and fire in a forthcoming issue of Stag Magazine. The same publishing house will carry Battalion Chief Fred Newjahr's account of the Los Angeles train disaster which I covered from an easy chair in my living room, taking copious notes from the live television coverage. Wait 'til Doc hears that!

The Penalty For Not Being Prepared Is a Big Casualty List

New inventions mean New preventive measures in fire fighting—so too New and Better protective equipment must be available for your firefighters.

Are you combating the modern fire hazards with modern life-saving apparatus?

Here is the modern efficient, quick protection in cases of smoke suffocation, gas poisoning, heart attack, electric shock, etc.

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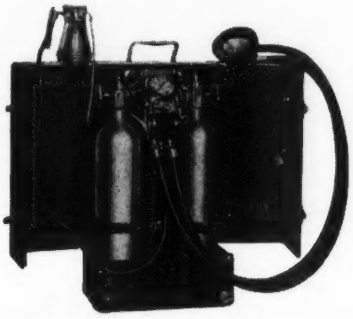

Hundreds of departments know from experience that Stephenson Resuscitators are most effective and do more for the patient.

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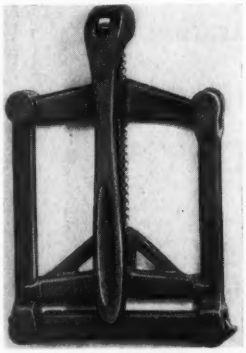

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- The trigger alone gives you fog, spray or stream.
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REGULATION AND DROP BRIM MODELS

The "NEW YORKER" — No. 5A — LEATHER

"NO PRICE IS TOO HIGH TO PAY FOR SAFETY."

Write for Catalog 351

CAIRNS & BRO., Inc. - Allwood, Clifton, N. J.

SINCE 1836

Down Long Beach way, Super Sleuths Omel and Beeson of Fire Station 2 observed a car traveling along the alley behind the firehouse one dark night. They noticed the person deposited in each of the trash barrels lining the alley a neatly tied box.

As reported in the "Fire-Lines," the Long Beach Firemen's Mutual Benefit Association, the two firemen who shoulda-been-homicide-detectives, decided that this unusual event smacked of the Black Dahlia Case, Jack the Ripper and Sherlock Holmes.

Accordingly, Omel and Beeson took their captain into their confidence. The captain, agreeing that the boxes probably contained portions of a dismembered cadaver, ordered the two to fetch one. When they got the package into the station the firemen hovered over it while the package was carefully unwrapped.

Contents: The insides of a Cat Box.

Letter from Al H. Redles, secretary and director of sales of the Bachman Brothers Company, makers of plastic scale models, including the fire helmets which I'd just as soon forget, thanks this column for the publicity. Al describes a new package which his firm is planning to bring out shortly and when Al gives the green light I'll describe it to you. Something no buff should be without.

A newspaperman friend of mine, who prefers to remain anonymous, sends along an extensive feature describing the various buff clubs in New York City, together with a discussion of Commissioner Edward F. Cavanagh's orders regarding fire buffs. I may be in the minority on this point, but if the newspaper story gave a fair account of it, I'm inclined to side with Fire Commissioner Cavanagh. But as veteran newspaperman Bob Casey says in his two books on this writing dodge to keep from working: "You meet such interesting people." He must have had buffs in mind when he said it.

That's about it again for this month. Keep the anecdotes and what-have-you (barring stray pencil sharpeners of course) coming to 419 Napoleon Street, Playa del Rey. But don't send your funny stories to me. Send them to Brer Patterson.

L. A. Firemen Give Cystic Fibrosis Gift

Los Angeles Firemen on Dec. 10 presented a check for $3,884 to the Cystic Fibrosis Foundation. The disease is 98 per cent fatal and the average life span of its victims is seven years.

The check was presented by Firemen Dee Bowman and Richard M. Gifford, whose children died of the ailment. Fireman Gifford's twin children died of the disease in 1946 and Fireman Gifford's son died last August at the age of 13 months. His daughter, Linda Jeanne, 6, is under treatment for the same ailment.

The money donated to the foundation by firemen throughout the city of Los Angeles will be used for research and treatment at Children's Hospital.

Paul Ditzel

Fire Alarm Improvements For Los Angeles

Residents of the Harbor Area of Los Angeles late this year will begin using a new, $500,000 emergency alarm system.

Designed by the Fire and Police Signal Division, the system will replace the antiquated fire alarm boxes now in use in this important section of Los Angeles.

K. V. Keeley, Chief of the Fire and Police Signal Division, pointed out that the new system will have 300 boxes instead of the present 135.

"But they won't be strictly for fire alarms," he added. "Our new boxes will contain a telephone. When a citizen opens one to report an emergency, he will take the phone off the hook and will be connected by direct line to the new San Pedro Signal Office of the Fire Department at Oliver and Mesa Sts.

"He can tell the operator there the nature of the emergency which exists—what is burning, or if an ambulance or police assistance is needed.

"However, if he merely takes the phone off the hook it will activate a telegraph system, also ringing at the signal office, and a full fire assignment will be dispatched."

Keeley pointed out that many of the actual details of the system, other than technical ones, are expected to be ironed out when the system actually becomes operative.

He added that if the system proves successful in the Harbor Area it is possible a similar system may be installed in the Central area of Los Angeles.

The boxes probably will be painted the familiar red and lettered "Emergency."—*Cliff Dektar*

Gas Line Breaks; Disaster Averted

Prompt action by units of the Los Angeles Fire Department and the Southern California Gas Company prevented a disaster potential on Sunday, October 17, when an 18-inch main ruptured in a residential area of the city.

The leaking gas created a gigantic bubble which forced the street pavement to rise about 18 inches in one section. The break was discovered by a passing motorist.

When a full first alarm assignment, under command of Acting Battalion Chief Robert Radke, arrived he radioed for gas company emergency crews, police and extra equipment. Apparatus took positions at either end of the street, laid lines and evacuated a dozen homes, while pilot lights and other potential ignition points were snuffed.

A heavy odor of gas permeated the area along Warner Drive between Capistrano Way and San Vicente Boulevard. The huge pocket of gas permeated the adobe soil underground which tended to seal off the leak.

The break reportedly occurred in a newly installed service. Gas company crewmen drilled a hole and released the pent-up gas before any explosion could occur.—*Paul Ditzel*

...in heaviest smoke and toxic gases...

BREATHE FRESH, PURE AIR!

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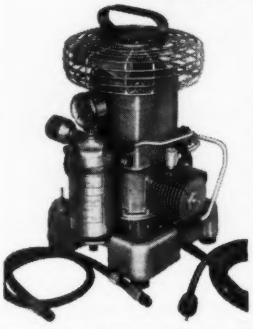

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ARE YOUR FIRE PUMP GATES & VALVES HARD TO OPEN?

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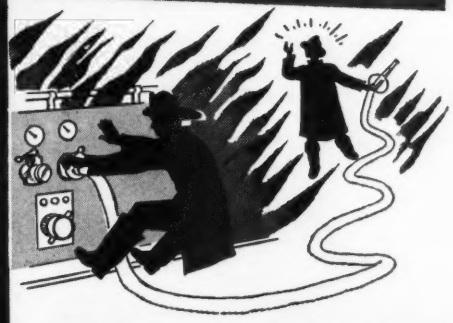

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FOUR GALLON CASE . . . . $ 15.00

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Fire Equipment Dealers: Territories open for distribution—your inquiries invited

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MANUFACTURED BY
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WHAT'S NEW

Among the Manufacturers

- products
- processes
- personalities

Seagrave Acquires Maxim

A joint announcement has been made by The Seagrave Corporation, of Columbus, Ohio, and The Maxim Motor Company, of Middleboro, Mass., as follows:

"Effective as of the close of business December 29, 1955, The Maxim Motor Company of Middleboro, Massachusetts, builders of top quality motorized fire apparatus, became a wholly owned subsidiary of The Seagrave Corporation of Columbus, Ohio.

"The present management of The Maxim Company will continue to operate the business as heretofore, with no changes in sales, service or production policies. In other words, the sales, service and other business relations of Maxim are not to be disturbed.

"The managements of both Seagrave and Maxim believe that the combined efforts will result in better products for customers at prices consistent with competitive trends. Both Seagrave and Maxim produce a complete line of custom-built fire apparatus consisting of pumping engines, crash-fire trucks, quadruples, squad cars and aerial ladder trucks. Each company will continue to offer the outstanding individual features which have been service tested and universally accepted by fire departments everywhere.

"Maxim will continue to offer the Magirus aerial ladder to United States and Canadian municipalities having hill or high traffic density problems."

4 times the value for your money!

AMBULANCE

plus

FIRE FIGHTER

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POLICE PATROL

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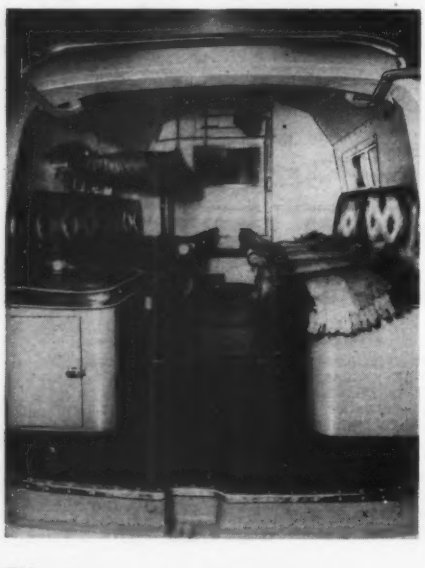
RESCUE TRUCK



Here is one of the most unique, the most versatile and the most effective vehicles any community can own. It's a 4 in 1 unit that can handle all ambulance calls —and give you extra effective apparatus for 90% of your fire calls as well.

Now, for the first time, you can own this sturdy DISASTER UNIT — a big GMC chassis — 200 GPM — Pumper — 150-200 gals. water capacity — generates 6,000 gals. of foam — accommodates four stretcher patients — or 12 men and space for generator, flood lights, fire hose, suction — 250 feet of booster on reel — resuscitators, oxy-acetylene burning equipment, suction and discharge both sides of vehicle, etc. A real EMERGENCY VEHICLE as well as a fine ambulance. Can be had as ambulance without pump or — in any combination. Costs, complete information promptly furnished—write—

The

CHRISTOPHER COMPANY

66-70 BEAVER ST.

NEW YORK 4, N.Y.

New Approach to Polishing Problems

"Committee work," that is, the business of shining the brass, was bad enough in the days before chromium, but it's a greater headache in most fire departments today, what with the increased brightwork on most fire apparatus and equipment.

Now comes what the maker, A & B Distributors, claim is a "revolutionary approach" to today's metals polishing problem. It's called "Nevr-Dull." It is neither a paste nor liquid. Instead, it is cotton wadding impregnated with a special formula packed in a neat container.

A wad of this cotton, torn from the contents of the can, is merely rubbed over the surface to be polished, and the job is done. It is claimed that it doesn't scratch, corrode or leave any chalky deposits in cracks or crevices and that it saves time and labor.

For further information write A & B Distributors, 51 Leonard street, New York 13, N. Y.

New Filmstrip on Fire Prevention

A new filmstrip designed to teach elementary school children the most obvious fire hazards and how to prevent them has been released by The Filmstrip House, 15 West 46th Street, New York 36, N. Y.

"Fire—a Dangerous Friend" takes the child on a tour of an average American home and grounds, showing him, by

means of handsome full-color pictures, the danger spots, and means of fighting a fire when it starts.

Fire departments and property owners, as well as schools, should find this strip of value in enlisting the interest of children in an effective fire prevention program.

The 35-frame filmstrip may be obtained from The Filmstrip House for $5.00. Mail orders are accepted.

Safety Clothing Co. Makes Changes

Lee Debes and Edward Harris, new owners of the Safety Clothing and Equipment Company, 1990 East 69th Street,

EDWARD HARRIS

LEE DEBES

Cleveland 3, Ohio, have been named president and vice-president-treasurer respectively. Earl H. Brooks is company consultant.

They wish to assure their customers "that the same high standards of designing, manufacturing of quantity marchandise and efficient service that have prevailed for the past 32 years will continue uninterrupted."

Automatic Sprinkler Issues New Catalog

"Engineered Special Hazard Fire Protection" is the title of the comprehensive illustrated catalog (No. 73) just issued by "Automatic" Sprinkler Corporation of America, Youngstown 1, Ohio.

The publication covers the variously accepted methods of fire detection, prevention and control and extinguishment encountered in the field of special hazards. The catalog is packed with pertinent

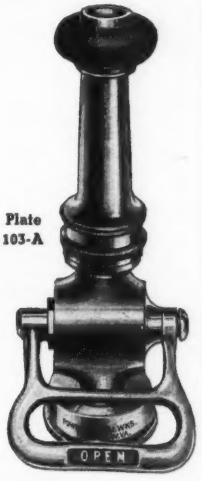
CHIEF POWHATAN—

Sachem Leader Line Shut-Off Nozzle For Direct Connection to 1½" Hose

Base Thread: 1¼" or 1½"
Discharge End Thread: Standard chemical

Waterway ..... 13/16"
Tip discharge range ..... ¼" to ¾"
Standard nozzle tip discharge ..... ½"
Overall length with tip ..... 8¾"
Approximate weight ..... 4 pounds
Finish: Polished bronze or chromium plated.

Plate 103-A



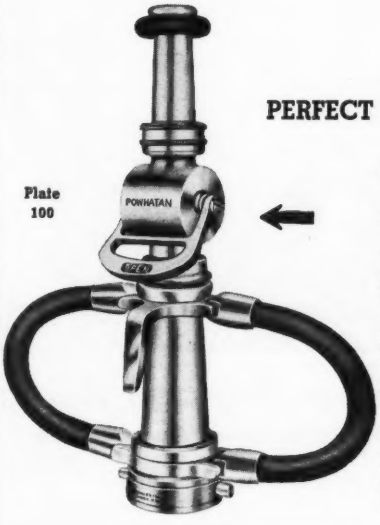


Plate 100

PERFECT COMBINATION PLAY PIPE With Plain Tip

Base Thread: Any 2½" fire department thread. Discharge end of play pipe and base of shut-off nozzle: Underwriters' tip thread or any 1½" fire department thread. Tip end of shut-off regularly furnished threaded 1½" national standard thread, but other 1½" threads can be furnished when specified.

Nozzle tip discharge range ..... ⅜" to 1¼"
Standard nozzle tip discharge ..... 1"
Maximum nozzle tip discharge ..... 1¼"
Overall length of assembly ..... 18½"
Approximate weight ..... 18 pounds
Finish: Polished or chromium plated.

Send for a copy of our new Catalog "A"

POWHATAN BRASS and IRON WORKS
RANSON, WEST VIRGINIA
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Firefly License Plate Signs

Five distinctive designs "Scotch Lited"

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THE WORLD'S FINEST "QUICK-HITCH" GARMENTS

"THE SUIT THAT SUITS"

Here is the suit that really gives you—3 suits in 1—a tough cotton duck outside to take rough service—a 100% Du Pont Neoprene interlining, completely waterproof—and a comfortable warm dry lining, light for warm climes, heavier for cold. Worn by firemen the world over.

You can't beat a GLOBE SUIT
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GLOBE SUITS

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Build Your Own Hose Storage Racks

Lok-Tite brackets help solve hose storage problems by providing ample ventilation and easy access for fittings inspection in limited space. Build your storage racks with new or used materials.

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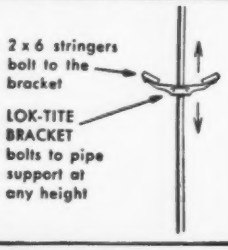
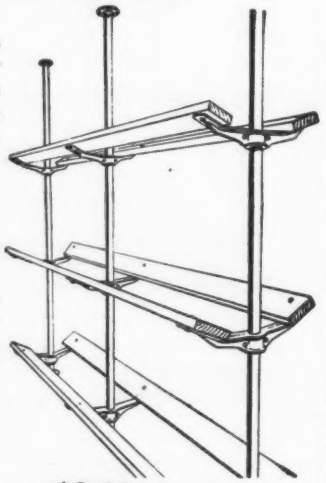
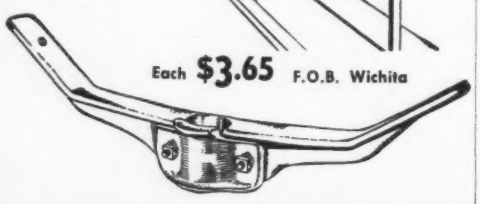


Lok-Tite Brackets won't slip under any load the pipe and stringers are able to support.

Lok-Tite brackets, light weight aluminum alloy, designed for strength and easy installation.





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information, diagrams and illustrations.

Copies may be had by writing the company.

SAFA Releases New Publications

Two new publications have been released by SAFA Alarm Division, the Fyr-Fyter Company, Orrville, Ohio, which should interest members of the fire service.

Catalog 15 covers SAFA Signal Systems for municipal industrial and proprietary installations. A new 10-page brochure illustrates and describes SAFA Air Alarm Systems.

The plastic-bound catalog contains sections on Fire Alarm Boxes, Accessories and Parts; Central Station Control and Component Equipment; and Air Alarm Systems. Both catalog and brochure are printed in colors on heavy stock in standard reference size.

For further details write SAFA at the above address.

Bullard Appoints O'Donnell Sales Manager

E. W. Bullard, Jr., Vice President, in charge of sales for E. D. Bullard Company, San Francisco, manufacturers of Industrial safety equipment, has announced the appointment of Paul W. O'Donnell as Sales Manager.

Mr. O'Donnell joined Bullard as Industrial Relations Manager in 1952 and has been in charge of distributor sales east of the Mississippi since that time. His new duties will include management of all company distributor sales throughout the United States and Canada. Mr. O'Donnell's headquarters for the present time will remain in Chicago.

Two Industrial Fires Cause $200,000 Damage in San Diego

Two multiple alarm fires on successive days caused damages estimated in excess of $200,000 to two San Diego, Calif., firms.

The first blaze swept through the paint shop and chemical laboratory of the Langley Corp., aircraft subcontractor and fishing reel manufacturer. Company officials estimated damage at $100,000.

The fire was believed to have started from spontaneous ignition in the paint shop. Three employees preparing to leave the plant at the close of their shift discovered the fire shortly before 3:30 a.m., Feb. 7. Two firemen were hurt.

The following evening another $100,000 damage fire destroyed the Qualitee Dairy Warehouse at 11th Avenue and J Street in downtown San Diego.

The blaze started from an undetermined cause several minutes after the corrugated iron warehouse closed for the night. Employees in the dairy's processing and distributing plant across the street saw the flames about 15 minutes after the warehouse had been closed, and called the fire department. *Paul C. Ditzel*

Persons in the News

Asst. Chief J. D. Elder Retires

Assistant Chief John D. Elder, of the Stockton, Cal., Fire Department retired from that department on February 1, concluding 34 years of service, the last year of which he spent as Fire Marshal in charge of the Fire Prevention Bureau.

He was succeeded as Fire Marshal by Second Assistant Chief Norman H. Nordwick.

Chief Bacil Roberts Retires

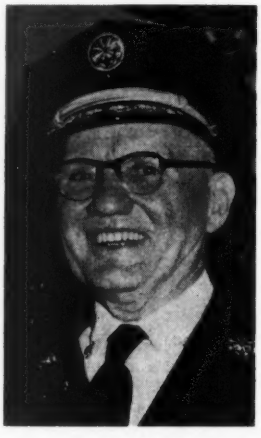
Climaxing 30 years in the Inglewood, Calif., Fire Department, Chief Bacil Roberts retired on December 31, 1955. Chief Roberts, 55, has been a fireman for 33 years and was named to head the department in 1926.

When he became chief, the Inglewood Department consisted of 6 regular firemen and a few volunteers. Today, there are 62 men in the department, divided among three stations. A fourth station will soon be completed.—*Paul C. Ditzel*

Clarke now Philadelphia Deputy Commissioner

Former Assistant Chief of Department Joseph M. Clarke has been named Deputy Commissioner of the City of Philadelphia in which post he will supervise and coordinate all fire prevention practices.

The new commissioner as assistant to Deputy Commissioner George E. Hink, Chief of Department, has been second in command at all multiple alarm fires and



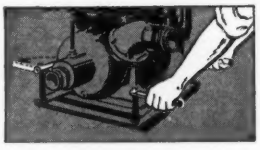
J. M. CLARK

major operations attended by Philadelphia's fire fighters since 1952.

He has a background of over 30 years active service in fire protection and prevention. He has helped to formulate many citywide and departmental preventive procedures, many of which have brought

Starts throwing water in less than 30 seconds!

GORMAN-RUPP DUAL FIRE FIGHTER



TRULY PORTABLE. **All models come equipped with carrying handles for two-man carry. Weight varies from 160 to 166 lbs. Picture shows handles in carrying position.**

Fast action is urgent, when fire strikes. And when the water source is hard to reach, there's nothing more useful to carry on your truck than a Gorman-Rupp Dual Fire Fighter.

In a bare half-minute, water starts flowing through the lines. It can supply water to the truck pumper sufficient to operate two ½-inch nozzles at 100 pounds, or pump directly to the fire.

Gorman-Rupp Fire Fighter Pumps are backed by a positive plain-language guarantee. Ask your distributor for Bulletin 9-FD-11 or write direct.

Model 61½A-23FB	50 GPM @ 110 lbs.
Model 6201 FF	100 GPM @ 80 lbs.
Model 6301 FF	210 GPM @ 40 lbs.

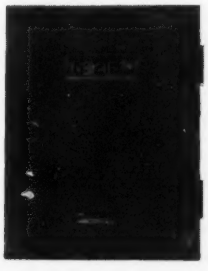
The Gorman-Rupp Company

305 BOWMAN ST. • MANSFIELD, OHIO

Saves Delay

WHEN FIRE ALARM SOUNDS - - - TURN ON FIRE STATION LIGHTS AUTOMATICALLY with

Time-Lite Unit



Unit turns on Fire Station lights and shows time alarm received.
Available in 15 and 30 amp. capacity.
Easily installed and can be tripped by any existing fire alarm system.

Bulletin on request.

THE FAIRWOOD COMPANY

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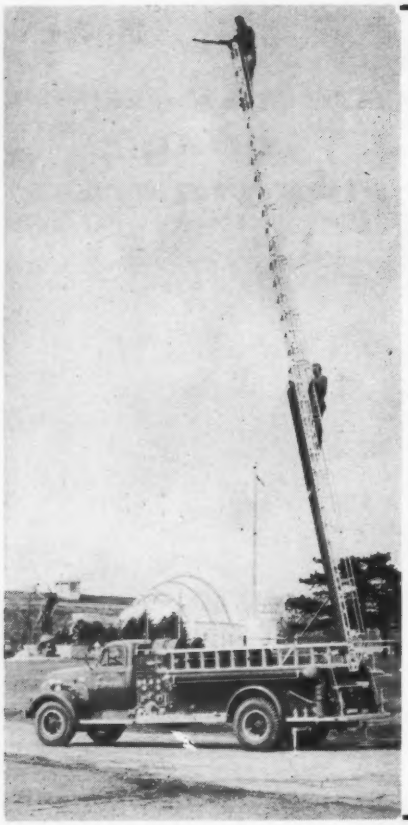

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shown in the picture enables these firemen to direct the water *down* on a fire—the way it does the *most* good.

Every day aerial ladders are proving invaluable in controlling *bad* fires. Equip your Department with a MEMCO AERIAL—NOW! Don't wait until you have had that *bad* fire.

Your Department *CAN* afford a MEMCO AERIAL!

Electrically operated by power from the truck battery—it can be installed on one of your present trucks, or incorporated into a new combination by your fire truck manufacturer.

Photo by the courtesy of LaFrance Fire Engine & Foamite Limited, Toronto, Ontario, Canada, who built this Quintuple Pumper for the Department at Prescott, Ontario.

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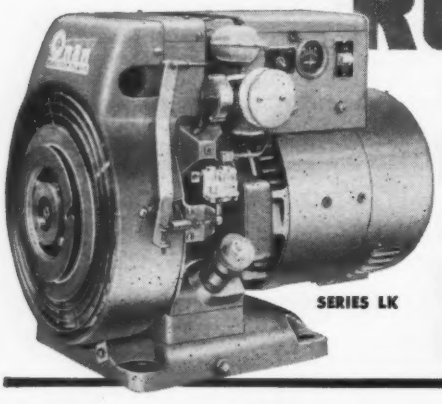

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international recognition to Philadelphia. The Philadelphia Fire Department has just been named to receive the NFPA Annual Grand Award. It also won that award in 1955 and placed second in the 1954 contest.

Henry Drake Retires

Chief Henry Drake, of Clinton Corners, Dutchess County, N. Y., field representative of the N. Y. Division of Safety, Bureau of Fire, retired in December after seven years with that agency. He was formerly head of the Clinton, N. Y., Volunteer Fire Department and has a long record as instructor and specialist in the fields of fire protection and prevention. His future plans are not announced.

Placentia Fire Chief Retires After 35 Years

Chief Joe Pauchon of the Placentia, Calif., Fire Department retired January 1 after 35 years of service. The department was using a hand-drawn hose reel cart when Chief Pauchon first joined the volunteer brigade.

Paul Ditzel

C. W. Espey Chief at Johnstown

Carl W. Espey, a veteran of 37 years fire fighting service, has been elected chief of the Johnstown, Pa., Fire Department.

He had been serving as acting chief since the death of Fire Chief Albert Fisher, December 14, 1955.

Chief Espey has been a member of the Johnstown department since September 16, 1918.

He was promoted to captain March 1, 1948, and to assistant chief February 20, 1954.

Glenn Sease

Fire Marshal J. E. Ritchie Retires

J. E. Ritchie, who had been deputy fire marshal for the Province of Ontario, retired after 36 years with the department.

Mr. Ritchie was a former president of the University of Toronto Engineering Society, was a member of the Association of Canadian Fire Marshals and the Kinsmen Club of Toronto.

John Karl Lee

George Collins Chief at Scarboro

George Collins has been appointed Chief of the Scarboro, Ont., Fire Department.

Chief Collins has had 30 years of experience as a fire fighter in the township. He served the department as a volunteer for three years, and became a permanent fireman in 1926. He had been deputy chief since 1951.

Today Scarboro has five fire stations fully equipped and a new station which is now under construction to cover the northern part of the township. This latter should be ready in three months time and

then the present force of 80 firemen will be increased. The department has five pumpers, four hose trucks and one 85-foot aerial. Chief Collins credits the growth and efficiency of the department to retiring Chief Tom Love.

John Karl Lee

Royer to Supervise Iowa Training

Keith Royer is the new Supervisor of Firemanship Training at Iowa State College, it is announced by G. Ross Henninger, Asst. Director, Engineering Extension of I.S.C. Royer takes over the post formerly held by the late Mark Brosier.

Before coming to Iowa, Royer was Chief Instructor and head of field training in Kansas on the Staff of the University of Kansas. Previously he served with the Wichita, Kans., Fire Department.

With his colleagues, Floyd Wm. (Bill) Nelson, formerly assistant chief of the Atlantic, Iowa, Fire Department, and William R. (Bill) Simpson, formerly of the Centerville, Iowa, and Stillwater, Okla., Fire Departments, the new Supervisor will bring an alive, alert and well rounded training program to Iowa's 15,000 men of the fire service.

Bridges Out, Fire Destroys School

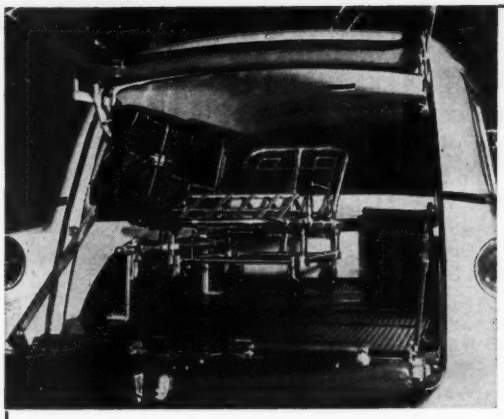
An $85,000 fire destroyed a two-and-one-half story dormitory and classroom building at Rumsey Hall, a private school at Washington, Conn., on Dec. 7. Volunteer firemen from New Preston, who joined those from Washington Depot in fighting the blaze, were hampered in reaching the scene because the bridges on the northern and western approaches to the rural area where the school is located were among the 13 washed out in the Aug. 19 flood that swept the New England area.

An eight-year-old boy, playing with matches, was responsible for the fire. Chief Carl Sjonost, of the Washington Volunteer Fire Department, said that flames were breaking through the roof and threatening two adjoining buildings when his men arrived at the scene shortly after 1:30 P.M. Two buildings were saved, one of which was only six feet away from the burned structure.

The school, which moved to Washington from Cornwall in 1949, had 95 day and boarding students, and a faculty of 10 full time and five part time instructors. John Schereschewsky, a radio personality, and former Harvard football star, is Headmaster of the school. The razed building, one of the largest on the campus, contained a study hall, classroom, faculty room, library and two faculty apartments in addition to the dormitory space.

The building was known as Sanford House and was originally a barn bought by Ezra Fitch, of the New York firm of Abercrombie and Fitch, for use in the cattle and show horse business. It was remodeled in 1949.

Tom Magner



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Washington full senior size Kontour-Kot with 5" cushion tires, in a Ford country sedan.

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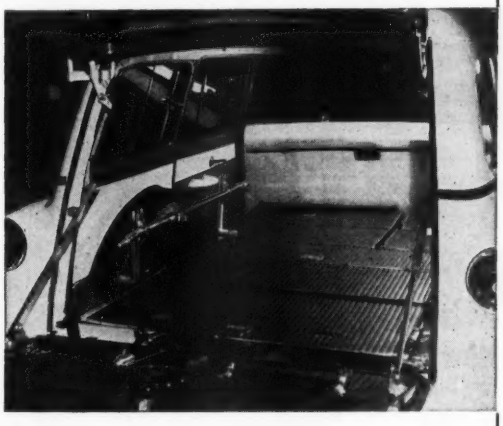
Washington No. 8 cot hook in place. Quickly removed by four screws, leaving only two small flat plates on floor. Tailgate plate available to cover offset at rear door.



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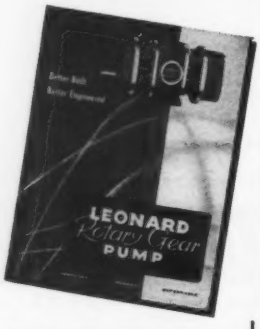
How LEONARD Rotary Gear PUMP Saves You Money Year After Year



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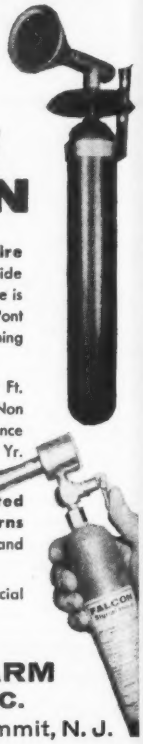
What's Burning?

THE FOLLOWING LIST includes fires of $10,000 and over in the United States and Canada for the period from January 22nd to February 22nd.

Alhambra, Ariz.—John Sorenson packing shed damaged.
Mesa, Ariz.—Main building Mesa Daily Tribune destroyed.
Little Rock, Ark.—Brown Packing Co. plant, one mile west, destroyed.
East Los Angeles, Cal.—Hamon Tool and Mfg. Co. and Welcome Meter Co. damaged.
Long Beach, Cal.—Ford Motor Co. 72-acre plant damaged by fire caused by flood.
Los Angeles, Cal.—Metropolitan Building damaged.
Los Angeles, Cal.—Bel-Air mansion of Louis Amder destroyed.
Los Angeles, Cal.—Los Angeles Times Building damaged.
Oakland, Cal.—Broadway Sportsland, Scandia Lunch Room, Royal Clothiers, Crabby Joe's Restaurant, cigar-liquor store, shoe shine stand and tailor shop in building 1017-29 Broadway and M & M radio-television shop, Deluxe Lunch Room, Economy Print Shop, 544-49 Eleventh street, damaged.
San Diego, Cal.—Qualitee Dairy warehouse damaged.
San Diego, Cal.—Paint shop and chemical laboratory of Langley Corp., aircraft subcontractor and fishing reel manufacturers, damaged.
Turlock, Cal.—Bank of America damaged.
Shelbyville, Del.—Former W. G. Williams Co. warehouse destroyed. Spontaneous ignition.
Live Oak, Fla.—Eagle Department Store, McLeod's 5 & 10¢ store, Harry Dupre Cash Store and apartments, damaged.
Atlanta, Ga.—Benteen Elementary School destroyed.
Blue Ridge, Ga.—Home Store Grocery, Henbree Furniture Co. and John Jabaley & Sons' drygoods store, all in the Bailey building, destroyed.
Cairo, Ga.—Cairo pickle industry destroyed; nearby cotton warehouse damaged.
Chicago, Ill.—Motor freight garage of Relay Transport Service destroyed.
Chicago, Ill.—Building occupied by O'Mara Furniture Co. damaged.
East St. Louis, Ill.—Fowler building housing the Publix restaurant, Union National Bank building and a third office building destroyed. Spivy building damaged.
Rockford, Ill.—Automobile agency operated by Rock River Motors Co. in business area, destroyed.
Taylorville, Ill.—Texaco service station owned by Don McAdam destroyed. Gasoline overflowing from a truck reached a hot stove.
Bluntsville, Ind.—Barn and livestock owned by Martha Yockey and E. V. Steel, destroyed.
Frankfurt, Ind.—Demin & Thompson Lumber Co. destroyed.
Logansport, Ind.—Logansport Country Clubhouse destroyed. Boiler explosion.
Marion, Ind.—Marion Hotel and adjoining building occupied by National Holiness Missionary Society destroyed.
Muncie, Ind.—Durham Manufacturing Co. furniture plant destroyed.
Nashville, Ind.—Black Lumber Co. and adjoining appliance store, destroyed.
Rochester, Ind.—Building known as Arlington Block, occupied by Metz Smoke House, State Finance Co., Western Auto Store and K. of P. Lodge rooms, destroyed; adjoining Peoples Cafe, OK Barber Shop, Sta-Curl Beauty Shop and Arlington Hotel, damaged.
Cedar Rapids, Ia.—Metal Maintenance building owned by Collins Radio Co. damaged.
Davenport, Ia.—Warehouse of State Furniture Co. and adjoining Amvets hall damaged.
Des Moines, Ia.—Building housing Otis Elevator Co., Hamill Auto Supply Co., Hawkeye Cleaners, Roosevelt Realty Co., General Typewriter Exchange, French Glass & Paint Co., Standard Bearings Co. and Macdonald Letter Service damaged.
Indianola, Ia.—Honegger's and Co. elevator and feed mill destroyed.
Kalona, Ia.—Lower Deer Creek Mennonite

Sounds for *Safety*
engineered by FALCON



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Any fireman can have a catalog by writing—

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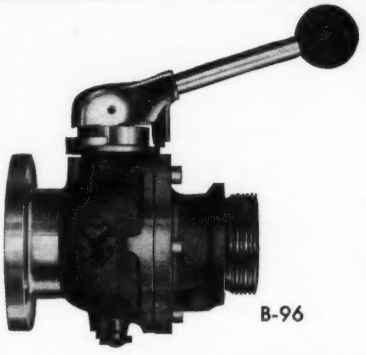
Church, seven miles northwest, destroyed.
Ottumwa, Ia.—Buildings of Winger Manufacturing Co., makers of packing house equipment, damaged.
Tama, Ia.—School building on Indian reservation damaged. Set by several youths.
Kansas City, Kans.—Markl Buick Co. building destroyed.
Lexington, Ky.—Frazee Hall at University of Kentucky destroyed.
Murray, Ky.—Ellis Popcorn Co. plant destroyed.
Verda, Ky.—School building destroyed.
Alexandria, La.—Dinnat's Bakery, Bayou State Mill Works and Deen's Barbecue Stand destroyed.
Bangor, Me.—Three apartments at 40 High street damaged.
Brooklin, Me.—Town's fire station destroyed.
Fairfield, Me.—Giguere's supermarket and adjoining business building, destroyed.
Mapleton, Me.—High school building destroyed.
Seal Harbor, Me.—Summer home of Gilbert Montague destroyed.
Baltimore, Md.—Baltimore Aircoil Co., Inc., plant damaged; Dietrich Bros. steel plant heavily damaged.
Baltimore, Md.—Eshelman building damaged.
Baltimore, Md.—Carlin's Iceland, skating rink, destroyed. Explosion in refrigeration system.
Brooklyn Park, Md.—Public hall in 6000 block of Bellgrove road destroyed.
Berwyn, Md.—Warehouse at Berwyn Fuel & Feed Co. destroyed.
Boston, Mass.—Sons of Italy Hall in East Boston's congested district, formerly housed the Trenton street Baptist Church destroyed.
Medford, Mass.—Roberts Junior High School damaged.
Newton, Mass.—Eliot Congregational Church destroyed.
Breckenridge, Mich.—Breckenridge Farmers Elevator destroyed.
Cass City, Mich.—Kettlewell Furniture store destroyed.
Charlotte, Mich.—Yund's market and Al Cudney's appliance and auto accessory store and upstairs apartments, damaged.
Ionia, Mich.—Warehouse of Ionia State Reformatory destroyed.
Lincoln Park, Mich.—Business block occupied by Rose Jewelry Co., Neisner Brothers, Hobelle Shop, Father & Son Shoe Store and Cunningham Drug Store destroyed.
Linwood, Mich.—Bluedol's Beauty Shop, Richardson's Television store and Judy Ann Photography Shop damaged. Rubbish pile.
Plymouth, Mich.—Warehouse of Warm Air Heating & Supply Co. destroyed. Efforts to thaw frozen pipes with lighted newspaper.
Rockwood, Mich.—Downriver Casting Co.'s pattern and grinding shop destroyed.
Wayne, Mich.—W. L. Gates Furniture Co. destroyed. Defective wiring.
Duluth, Minn.—Cathedral elementary and junior high school building damaged. Defective wiring.
St. Paul, Minn.—Paint department of Arlington Corp.'s Plant No. 2 damaged.
St. Paul, Minn.—Grand and Lexington apartments damaged.
Gulfport, Miss.—Town House Cafe and Northrup Department Store damaged.
Festus, Mo.—Citizen's Bank Building, occupied by two dentists, a real estate firm and an attorney, damaged.
Kansas City, Mo.—Owens Metal Co. plant damaged.
St. Louis, Mo.—Moline School in north St. Louis County damaged.
St. Louis, Mo.—S. S. Fort Gage, riverfront landmark moored at foot of Popular street, housing P-G Channel Service Co., Standard Boat & Motor Co., Allgire Rudderless Towboat Service, Inc. and branch of Cargo Carriers, Inc., damaged.
Ste. Genevieve, Mo.—Audubon Hotel destroyed.
Columbia Falls, Mont.—Stoltze Lumber Mill destroyed.
Jersey City, N. J.—Swift & Co. meat plant damaged.
Long Branch, N. J.—Mansion of Robert Badenhop damaged.
Netcong, N. J.—Acme Market on Route 206 destroyed.
New Brunswick, N. J.—Broadway Hotel building and stores damaged.
Passaic, N. J.—Passaic City Club damaged.
Union, N. J.—Six stores from 344-470 Chestnut street damaged.
West New York, N. J.—Guyer's Tavern, barber



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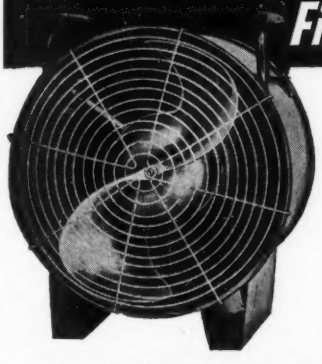

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Save rushing to chimney fires—avoid slippery roofs by using IMP Chimney Fire Extinguisher. Just throw a 65¢ package "as is" on the hottest part of the fire in the stove, furnace or fireplace. The chimney fire will be out in jigtime without water or chemical damage. Recommended by many chiefs who carry IMP in their cars. ALSO —LIQUID IMP for *oil fired units*, is as much a fire preventative as pkg. IMP. Saves oil, money, increases heat, prevents sludge, reduces carbon deposits and is safe. You know what a fire hazard sludge is. Use LIQUID IMP in your own burners. 3½ oz. enough for 90 gals. kerosene or 55 gals. No. 2 fuel oil; 16 oz. enough for 5 times above quanity; 1 gal. enough for 1600 gals. #2 fuel.

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shop, sewing machine center, vacant store, Reno TV shop, Lynn's Arnold's Tuxedo & Tailor shop, Midway Luncheonette, Reiss Factory Outlet, Adar Ladies' Handbag Hospital, Jockem's Radio & Record Shop, Health House for Essential Foods, Greenberg's Stationery Store and apartments, destroyed.

Wildwood, N. J.—Five fishing boats and 50-foot section of pier at Ottens Harbor destroyed. Automobile skidded into diesel oil tank causing explosion.

Farmington, N. M.—Harry's liquor store and Swartz Sporting Goods store damaged.

Clarence, N. Y.—Dwelling on grounds of Buffalo Automobile Club damaged. Refrigerator motor sparks.

Freeport, N. Y.—Building on Merrick road, occupied by beauty parlor, real estate office, sportswear store and hardware store, destroyed.

Jamaica, N. Y.—Doscher furniture warehouse damaged.

Monticello, N. Y.—Simon Building, housing four stores and apartments, damaged.

Newburgh, N. Y.—Academy of Music theatre and six stores, including shoe store, jewelry store and drug store destroyed.

Nineveh, N. Y.—Buildings on Mrs. Martin Mannheimer's farm, two miles north, destroyed.

Patchogue, N. Y.—Thirteen stores and offices, including Helen Ann Saunders Dress Shop, Blum's Dress Shop, Suffolk Children's Court and probation offices and radio station WPAC, destroyed.

Plattsburgh, N. Y.—First Methodist Church destroyed.

Richfield Springs, N. Y.—Boss Live Stock Exchange, Otsego County, destroyed.

Tupper Lake, N. Y.—Two buildings in center of this Adirondack Mountain village, occupied by a drug store, women's apparel shop, insurance office and apartments, destroyed.

Walton, N. Y.—Crawford Brothers' feed mill and five railroad cars destroyed.

Goldson, N. C.—Barber Furniture & Hardware Co. destroyed.

Henderson, N. C.—Radio Station WHNC destroyed.

Kannapolis, N. C.—Grant Motor Co. damaged.

Kernersville, N. C.—Kernersville Lumber Co. warehouse destroyed.

Morehead City, N. C.—Morehead City Theatre destroyed; Belks Department Store damaged.

Spruce Pine, N. C.—Harris Clay Co. plant at Ingalls, seven miles out, damaged.

Winston-Salem, N. C.—B. F. Huntley Furniture Co. destroyed.

Tioga, N. D.—Northern Tank Line terminal building housing a workshop, office and storage room, destroyed.

Valley City, N. D.—Valley Appliance and Furniture stores, S & L Store, Brown Insurance agency and Kingdom Hall, a meeting place of Jehovah's Witnesses, destroyed.

Cleveland, Ohio—Warehouse of State Wiping Cloth Co. destroyed.

Columbiana, Ohio—Five business buildings in downtown destroyed; another store damaged.

Gates Mills, Ohio—Chagrin Valley Hunt Club horse stable and seven horses destroyed.

Lorain, Ohio—Nativity Catholic Church damaged.

Toledo, Ohio—Beegle Meats Div. of Hygrade Food Products Co., office of manufacturers' agent Stanley J. Brown, Lutheran Thrift Shop and vacant store, destroyed. Gas explosion and fire caused by cigarette lighter.

Toledo, Ohio—Barn 3 of Tropical Park race track destroyed.

Corvallis, Ore.—John Wood Products Co. damaged.

Merrill, Ore.—Lost River Hotel destroyed.

Portland, Ore.—Fleck's Orchid Farm destroyed.

Portland, Ore.—A. B. Smith Chevrolet Co. damaged. Explosion.

Roseburg, Ore.—Perkins Oil Co., Gates Rubber Co. and Berger Welding Shop destroyed.

Roseburg, Ore.—Melody Inn destroyed.

Curtisville, Pa.—West Deer Baking Co. destroyed.

Gilberton, Pa.—Warehouse of Gilberton Coal Co. destroyed.

Indiana, Pa.—Elks Club, men's clothing store and a furniture store in downtown, damaged.

Lancaster, Pa.—Assembly plant of New Holland Machine Co. destroyed.

Pittsburgh, Pa.—Dwelling of Robert Evans and adjoining dwelling, damaged.

Watsontown, Pa.—Eighth street Elementary School damaged.

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When he needs it—where he needs it

Big Beam

PORTABLE ELECTRIC HAND LAMPS

Model 700-A 2000-foot beam

Most powerful, heavy-duty hand lamp of its size. Adjustable 6-inch head. Operates on four standard No. 6 dry cells.

Model 211 1500-foot beam

Popular price, light weight, easy to carry. Adjustable 5-inch head. Holds two standard 6-volt lantern batteries. Operates on one; other is a spare.

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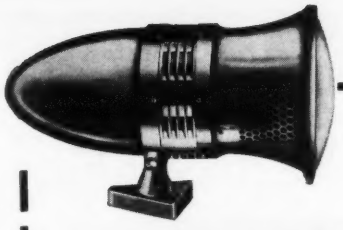
1986 HOME AVE., DAYTON 7, OHIO

Wilkes-Barre, Pa.—Packer Colliery coal breaker in nearby Plains Township, destroyed.
Providence, R. I.—United Camera Building, Plymouth Building and Hearny Community Auction House, destroyed.
Dillon, S. C.—Dwelling of Alan Schafer on Mullins Highway, six miles out, destroyed.
Loris, S. C.—Piggly Wiggly store destroyed.
Decaturville, Tenn. — Decatur County high school gymnasium destroyed; cafeteria damaged. Defective heating equipment.
Franklin, Tenn.—Franklin High School building destroyed. Lightning.
Pulaski, Tenn.—Martin College Administration building destroyed.
Springfield, Tenn.—Kemper Looseleaf Floor tobacco warehouse destroyed.
Channelview, Tex.—Educational building of Old River Terrace Church destroyed.
Duncanville, Tex.—Duncanville High School gymnasium destroyed.
Houston, Tex.—Ada Oil Co. warehouse damaged.
Itasca, Tex.—Buie Hardware & Furniture Co. on U. S. Highway 81, destroyed.
Newport News, Va.—Auto body and repair shop, restaurant, shipyard union office in the Moose Hall, warehouse, hobby shop, fraternal hall and 14 apartments, destroyed.
Everett, Wash.—Everett Daily Herald damaged. Furnace backfire.
Mayfield, Wash.—Dwelling and adjoining six bowling alleys and equipment destroyed. Furnace explosion.
Moses Lake, Wash.—Western Cold Storage warehouse destroyed. Faulty gas heaters.
Oakdale, Wash.—Inland Empire Pea Growers Association, destroyed.
Seattle, Wash.—Showalter Elementary School, buses and contents, destroyed. Short circuit.
Spokane, Wash.—Colonial Hotel damaged.
Spokane, Wash.—Gus Tire Co. destroyed.
Vancouver, Wash.—Durametal Works machinery and contents of A. B. Holmes destroyed. Explosion.
Washtucna, Wash.—Washtucna fire station destroyed. Spontaneous ignition.
Yakima, Wash.—Crawfore fruit warehouse destroyed.
Marlington, W. Va.—W. L. Davis building housing apartments, and adjoining building housing American Legion Post 50 and apartment, destroyed.
Edmonton, Alta.—Gas well, 115 miles northwest of Edmonton, destroyed.
Winnipeg, Man.—Minto Armories, Army training school, damaged.
Edmundston, N. B.—Grocery store owned by Albert A. Clavette, and three apartments destroyed.
Frederickton, N. B.—Supermarket in downtown business section destroyed; adjacent furniture store damaged.
Sault Ste. Marie, Ont.—Business building occupied by a restaurant, bakery and two apartments, destroyed.
Drummondville, Que.—Two buildings in old business section destroyed.
Montreal, Que.—Concrete plant of Roger P. Bouclay destroyed.
Richelieu, Que.—Wood processing plant of San-San Wood Manufacturing Co., Ltd., destroyed.
Ste. Angele de Laval, Que.—Poirier Hotel, Manoir Hotel, store of Bernard Levasseur and dwellings in this town on the shore of St. Lawrence River, destroyed.
Swift Current, Sask.—Interior of business building housing McLeod's hardware and clothing and other merchandise destroyed.

Get a Load of This

Mark Twain used to tell the story about the Mississippi River steamboat's whistle which was so big that every time it blew, the boat stopped.

Something similar is happening in West Hartlepool, England, where according to the British publication "The Fireman," the quantity of electricity consumed by West Hartlepool's three fire alarm sirens is so great that if the sirens are sounded after dark, domestic lighting throughout the town fades under the load.



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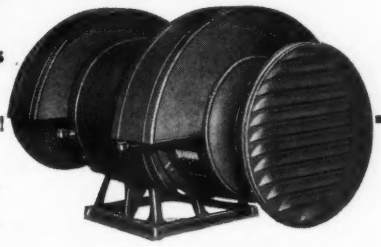

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Obituaries

Ex-Chief H. R. Merchant

Homer R. Merchant, 78, former Chief of the Gloucester, Mass., Fire Department, died Jan. 31, 1956, at his home in Gloucester.

Chief Merchant headed the department from 1919 until his retirement in 1944. During that period he twice served as president of the Massachusetts Fire Chief's Association.

Thomas F. Monaghan

Thomas F. Monaghan, 82, Superintendent of Fire Alarms at Holyoke, Mass., until his retirement, died at Norwalk Hospital, Norwalk, Conn., on January 28, where he had been a patient for three weeks.

Tom Magner

Assistant Chief Erwin

Assistant Chief Willie Bell Erwin of the Austin, Texas, Fire Department died December 25, last, while on duty at the Central Fire Station.

Chief Erwin was appointed fireman in 1914, and served in the capacity of assistant chief since 1927. He was 62 at the time of his death, which climaxed nearly 37 years of service to his city. The chief of the Austin Fire Department is J. E. Woody.

James A. Flynn

James A. Flynn, affectionately known throughout the fire service, died in Henry Ford Hospital, Detroit, January 27, 1956, at the age of 68.

He founded the Potter Fire Escape Company in 1923 and devoted all his time and effort to promoting the sale of sliding type fire escapes until 1946 when illness made inactivity mandatory.

Together with his wife, Bess, Jim Flynn was a familiar figure at the nation's important fire protection and fire prevention conventions. Bess Flynn died last July 15.

He is survived by a daughter, Betty Goder, and three sons, James, John and Charles.

January Fire Losses

Estimated fire losses in the United States during January amounted to $96,972,000, the National Board of Fire Underwriters has reported.

According to Lewis A. Vincent, NBFU's general manager, this $96,972,000 loss represents an increase of 28.8 per cent over losses of $75,265,000 reported for January, 1955, and an increase of 8.7 per cent over losses of $89,212,000 for last December.

These estimated losses include an allowance for uninsured and unreported losses.

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Book Department

FIRE ENGINEERING

305 East 45th Street

New York 17, N. Y.

Explosions, Fire Damage 9 Downtown Buffalo Firms

Arson investigators were looking into a three-alarm fire in downtown Buffalo, N. Y., that caused an estimated $150,000 damage to the Rich Building, scene of two previous fires in two months.

The blaze occurred early on a Sunday morning and witnesses who were in a bowling alley over a restaurant in the two-story brick building at Main and East Tupper Streets said they smelled gas for 10 minutes before an explosion buckled the floor.

The blast broke the big plate glass windows in the restaurant downstairs. Flames roared out and engulfed the building. About 100 restaurant and bowling alley patrons fled to safety.

The first alarm was pulled at 2:46 a.m., and was followed by a second at 2:49. An additional company was ordered at 4:04 and was followed by the third alarm at 4:17.

The third alarm was sounded after flames worked through false ceilings and got under the flooring of the bowling alleys, despite efforts of firemen who worked with gas masks. Freezing temperatures and icy pavement and equipment further hampered them. It was the city's 25th multiple alarm fire during 1955.

Damaged, in addition to Red Grange's Restaurant and the Franklin Bowling Center, were The Pizzeria, the branch bank of the Manufacturers & Trader's Trust Co., the Pollak Paint Co., Inc., Poppenberg's Pianos & Appliances, Noah's Ark Auto Accessories, Inc., Allied Sewing Machines and the Koolvent Aluminum Awning Co.

Detective Sgt. Fred A. Thomasula, head of the police arson squad, said the fire may have been touched off. He said a one-gallon can filled with a substance believed to be lacquer, was found in the rear of Red Grange's Restaurant, scene of two previously investigated fires, Oct. 26 and Nov. 26. Battalion Chief Charles J. Cammarata, first due chief, said the rapidly spreading fire apparently started in the restaurant.

Restaurant spokesmen told Sergeant Thomasula they had been working in the restaurant until 8 p.m. Saturday night, a few hours before the fire. They denied lacquer was being used. They further explained that repairs had just been completed after the last fire, which caused $500 damage; but the reopening had been delayed "because there was some question as to whether the owners of the building should pay for the repairs."

The Oct. 26 fire caused $1500 damage to the restaurant, said Sergeant Thomasula, adding that a can of anti-freeze was found on the premises at that time and several simultaneous fires were burning. He further pointed out that a man was seen running from the rear of the building after an explosion blew out the windows.

The November 26 fire apparently was caused by someone who tossed a lighted cigarette between washroom partitions.

—Paul Ditzel

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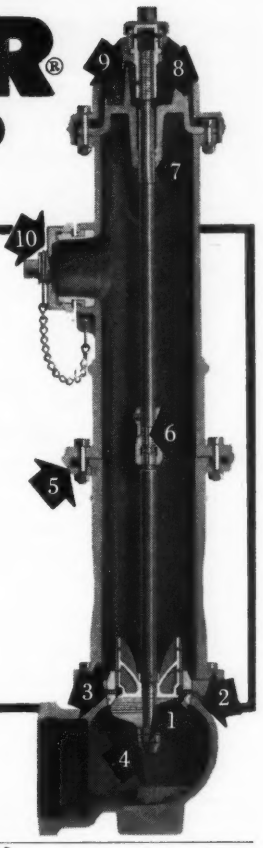

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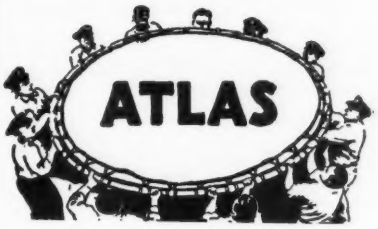

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